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Photograph by John F. Corrigan

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This issue of the *Bridgewater Review* was designed by Graphic Design Students from the Art Department.

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On the Cover
MICKEY MASK ANNIE
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EDITOR'S NOTEBOOK

Every summer our family packs the car, leaves Massachusetts behind and heads for the Midwest to visit grandma. After years of traveling to the Midwest, the trip has become something of a tradition and a sure-fire means of keeping the family together, even if that means enduring the inevitable backseat fights, the roadside pit stops and the endless stream of fast-food restaurants.

But if the trip has taken on certain unavoidable regularities, it has also given our family an opportunity to reflect on life in the Midwest. Naturally, as residents of Massachusetts we are convinced that the Commonwealth is the epicenter of civilization in the United States and blessed with endless beauty. But as our car rambles through the Midwest on route to our destination in Wisconsin, it becomes increasingly clear that there is indeed life outside of the Bay State, and in many respects a superior quality of life.

One of the first inescapable observations upon leaving Massachusetts is that the price of almost everything goes down, from gasoline to food to lodging. What is more, the people who are providing the gas and food and lodging are usually more pleasant and considerate. This economic and personal "culture shock" forces us to look more closely at life in the Midwest. As we move west we pick up a newspaper in Buffalo and find nary a hint of political infighting, but rather a litany of human interest stories. We drive through Cleveland and see that the city, despite its rusty image, is booming with construction including a new baseball stadium. We stop for dinner in Indiana and meet people so laid back and respectful that our faith in mankind is restored. And we attend a state fair in Wisconsin where the sense of community and pride in the simpler things of life is overwhelming.

Being true believers in the cultural, educational and medical superiority of Massachusetts, however, we at first are reluctant to see Midwestern hospitality, stability and simplicity as anything more than quaint rural qualities. But quickly we find that what the region may lack in terms of world renowned orchestras, dance companies, theater groups, universities and hospitals is matched by good government, low taxes, efficient services and healthy economies. The Midwest is certainly no utopia and has little of the intensity and the ambition of Massachusetts, but there is an undercurrent of common sense and non-partisan cooperation in this part of America that is sadly missing back home.

What many from Massachusetts would characterize as wide-eyed naivete and unsophistication is really the traditions of neighborly trust and attention to the more basic instincts of family, home, and church.

Perhaps the most attractive characteristic of life in the Midwest is that a stay there leaves one more relaxed and refreshed. Because the pace is slower, the people friendlier and the daily concerns more traditional, there is less attention paid to what is wrong with the world. The Midwest is not known for its angry talk show hosts or its preoccupation with political intrigue or the frenzy associated with sports and sports heroes. Call-in radio programs usually offer advice on home improvements, politicians are still public servants not the enemy and sports is more a polite social event with tailgating and good cheer rather than a crusade for victory. In such a climate one cannot help but feel relieved and forget the barrage of criticism and disappointment that seems to dominate life in Massachusetts.

But alas the week at grandma's house comes to an end and the family packs up the car and heads back to Massachusetts. As we enter the western part of the state the memories of life in the Midwest begin to fade and we become entranced with the beauty of the Berkshires, the confidence of the people and the societal drive for excellence. Circling Boston on Route 128 we are reminded that Massachusetts is a place of new ideas and new solutions, a truly international crossroads where the future is being shaped on a daily basis. We

pick up the paper and listen to the radio and find that life in the Commonwealth has not changed much while we were gone - there are still stories about corruption, political infighting and rude behavior. But we are home, where the good mixes with the not-so-good in ways that at times may be frustrating but are always invigorating and challenging. The Midwest may be a place to rest and reflect but Massachusetts is a place that is exciting and demanding, two conditions that are irresistible.





Illustration by Mark Johnson

New Wine In Old Bottles : The Rebirth Of Russia

by
**David L.
Sudhalter**

At a recent demonstration in Moscow, a protester held up a placard which read, "Lenin is life; Yeltsin is death." This statement poignantly demonstrates the kind of dilemma in which Russians find themselves. The old infrastructure no longer exists and life for the average family has become an even more desperate scramble for survival than it was under the old communist system. Waiting in line for bread is preferable to not being able to buy bread. Except for a very few, the quality of life has worsened considerably. Moreover, most Russians now feel that the political system has failed them and they are disgusted with the endless political squabbling that seems to go nowhere.

The post-Gorbachev period produced a stalemate between President Boris Yeltsin and the parliament

which, thanks to Gorbachev's attempt to preserve the communist party's dominance was made up of 2/3 former communists and bureaucrats.

The failed coup of August 1991, which was an attempt by the communists to oust Gorbachev and seize control of the country, did little to resolve the crisis of reform. Plans for constructing a true market style

economy had to be put on hold as the political crisis deepened. Yet, Boris Yeltsin is committed to a philosophy of privatization of industry and the creation of a capitalist system that would encourage free enterprise because he believes that is the only way by which Russia and neighbors can become welcome competitors in the world economy. Yeltsin has proven to be a very tenacious individual. Feisty and pugnacious, he has shown himself to be a strong and determined leader. Nevertheless, he couldn't accomplish much without legislation from a cooperative parliament.

By September 1993, Yeltsin and the Parliament were completely deadlocked. Alexander Rutskoi, Yeltsin's Vice-President and Ruslan Khasbulatov, Speaker of the Parliament, led a revolt of hard-liners against the President which paralyzed the government. Faced with this problem, Yeltsin declared the Parliament to be no longer legitimate and ordered the members out of the building.

During the first week of October, the stalemate escalated into an armed struggle in which the army used tanks to shell the White House (Parliament Building). The leaders of the revolt, including Rutskoi and Khasbulatov, surrendered and are now in prison facing trial for treason. Several people were killed during this episode.

For the Russian population facing unemployment, rising inflation and the loss of a social safety net, the crisis is very real indeed. While it can be argued that the former Soviet Union produced social and economic stability, the system also failed to provide an efficient and satisfactory quality of life. Daily shortages of food and other necessities became commonplace.

Factories, mines and oil fields also became so inefficient that their costs were greater than any profits they may have produced. Artificial wage and price controls created a make-believe world which could only be maintained by a dictatorship. This condition lent real meaning to the standing joke of the day, "We pretend to work and they pretend to pay us." Serious shortages of consumer goods and housing stock led gradually to the recent political reforms. But these reforms have not been

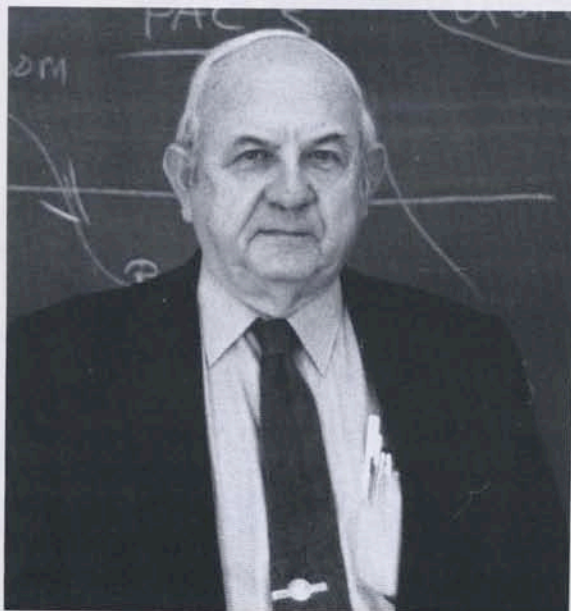
enough to really turn the country around.

Boris Yeltsin, already frustrated by an uncooperative Parliament convened a constitutional assembly. The result has been a new draft constitution which will be presented to the people on December 12, the same date on which new elections to Parliament are to be held.

The new Parliament will be made up of two houses, one directly elected by popular vote and the other selected from among the 13 blocs of parties now vying for support. The new constitution strengthens the President's powers by giving him emergency powers. A constitutional court will also be part of the new setup. The President is elected directly by the people for a four year term (Yeltsin's term of office expires in 1996). Yeltsin and his supporters hope that this new government will end much of the uncertainty and chaos which has been so prevalent and will provide the credibility with foreign powers that Russia so desperately needs.

On the positive side, despite all kinds of opposition, Boris Yeltsin's government has been making progress. Inflation has been brought somewhat under control; it is now a little more than 20%, almost enough to satisfy the International Monetary Fund which guarantees loans. Yeltsin has pushed through much privatization and continues to chip away at state subsidization of inefficient industries. More than 74,000 private businesses have been established. As a result, a whole new class of entrepreneurs has arisen. Elegant shops and Mercedes dealerships that cater to this new class can be found in Moscow and Leningrad (all for cash, of course). New laws have been promulgated that make it easier for people to buy and sell property. Collective farmers may now break up their farms if they want to.

Since taking office, Yeltsin has secured loans and credits of more than \$45 billion from 6 other industrial countries, including the United States. He has also made significant progress in relations with the other ten former Soviet Republics, convincing five of



them to join in a common currency and economic union. This would help resolve some of Ukraine's problems for example, because their economy is in even worse shape than Russia's. It is believed that the other ten will have no choice but to follow suit.

Most recently, Yeltsin has had Yegor Gaidar, one of the architects of market reform, rejoin his government. This move will help reassure foreign investors. Amoco oil has signed a contract to exploit the potentially rich Siberian oil reserves (which may rival those of the Middle East). Contracts have already been signed for the exportation of natural gas to western Europe.

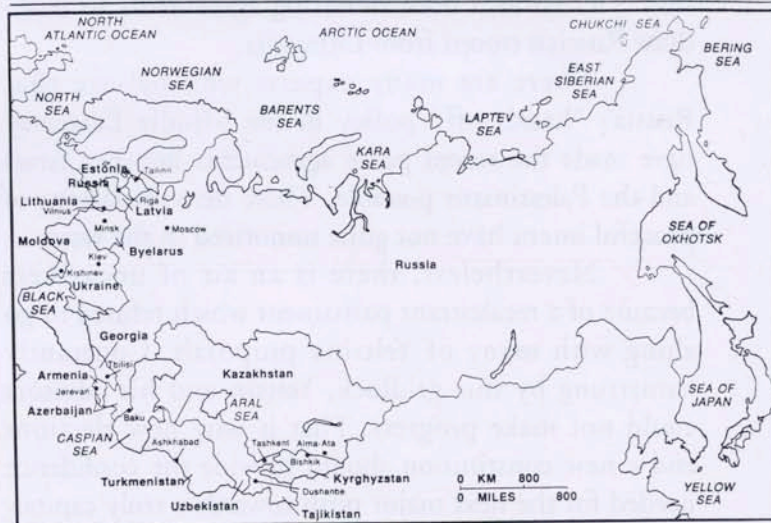
In two years' time, Yeltsin has made considerable progress in freeing Russia's economy from the grip of totalitarian economic practices. Much still remains to be done, however.

One of the problems retarding economic progress is the lack of credit. All transactions must be for cash. Therefore, little expansion of plants and businesses can take place. The legal structure is still uncertain at best. Contract law and a system of jurisprudence which can guarantee the sanctity of contracts is still yet to be created. Indeed, an entire legal system which can honor wills, real estate and many of the practices that we take for granted still awaits creation. The political system is in serious need of revision and there are as yet no serious political parties with programs or platforms so that the Russian people are forced to choose between personalities rather than parties. This lends credence to the popular belief that only a strong personality can rule Russia. Another problem that has cropped up recently has been corruption. Lacking internal controls, former party officials and apparatchiks are free to take bribes and engage in what amounts to wholesale theft of public funds. There are many rumors that tens of millions of dollars in foreign aid are disappearing into the pockets of corrupt officials.

Freedom of the press has so far withstood attacks from those who would try to control it. Religious freedom reemerged as an important source of satisfaction to both the younger and older generations and continues to play an important role in providing hope for the future. The Russian Orthodox Church has regained its importance in the everyday life of the people. Although there continues to be anti-semitism, Jews in Russia can conduct their religious schools and activities without fear of the authorities.

There are, however, many dark forces which have been unleashed by the many changes in Russia. A native Mafia organization terrorizes businessmen who refuse to pay protection. Several businessmen have been murdered

The Commonwealth of Independent States



THE 11 REPUBLICS OF THE COMMONWEALTH OF INDEPENDENT STATES

Republic	Capital	Population (in millions, according to 1990 census)
1. Russia	Moscow	(148.0)
2. Ukraine	Kiev	(51.8)
3. Uzbekistan	Tashkent	(20.3)
4. Kazakhstan	Alma-Ata	(16.7)
5. Belarus	Minsk	(10.3)
6. Azerbaijan	Baku	(7.1)
7. Tajikistan	Dushanbe	(5.3)
8. Moldova	Kishinev	(4.4)
9. Kyrgyzstan	Bishkek	(4.4)
10. Turkmenistan	Ashkhabad	(3.6)
11. Armenia	Yerevan	(3.3)

THE 4 REPUBLICS THAT DID NOT JOIN THE COMMONWEALTH OF INDEPENDENT STATES

Republic	Capital	Population (in millions, according to 1990 census)
1. Georgia	Tbilisi	(5.5)
2. Lithuania	Vilnius	(3.7)
3. Latvia	Riga	(2.7)
4. Estonia	Tallin	(1.6)

The area that makes up what was the Union of Soviet Socialist Republics (U.S.S.R.) is a mosaic of ethnic groupings and nationalities with approximately 130 different languages. After the dissolution of communism in the Soviet Union in 1991, this very diverse population reacted with nationalistic fervor, and the 15 republics of the Soviet Union contended with the question of whether or not was in their best interest to unite into a new union. Eleven did, into what is now called the Commonwealth of Independent States (C.I.S.), with 4 choosing independence of the Commonwealth.

as an example to others. An increase in drug trafficking, prostitution and general hooliganism has also resulted from the more permissive aspects of the new Russia. The younger generation, which now prizes its newfound freedoms since the communist youth organizations were abandoned, has their elders shaking their heads in disapproval of what they see as decadence. Pollution and toxic wastes as a result of the shoddy practices of the Soviet regime continue to destroy the environment. For example, careless dumping of nuclear wastes in the Arctic Sea has created an environmental disaster in that fragile area.

In foreign policy, Boris Yeltsin has single-handedly made serious inroads. Positive reduction of armaments and the continued honoring of former treaties has helped enormously to shore up relations with the United States and end the Cold War. Yeltsin's recent visits to Poland and the Czech Republic, which included public apologies for the Soviet actions in those countries, have also been reassuring to the west.

Despite the temptation to give aid to the Serbs during the present civil war in what was Yugoslavia, Yeltsin has wisely refrained from any kind of intervention. He has also been honoring agreements to withdraw Russian troops from Lithuania.

There are many experts who believe that Russia's "hands off" policy in the Middle East may have made the recent peace agreements between Israel and the Palestinians possible. These demonstrations of peaceful intent have not gone unnoticed in the west.

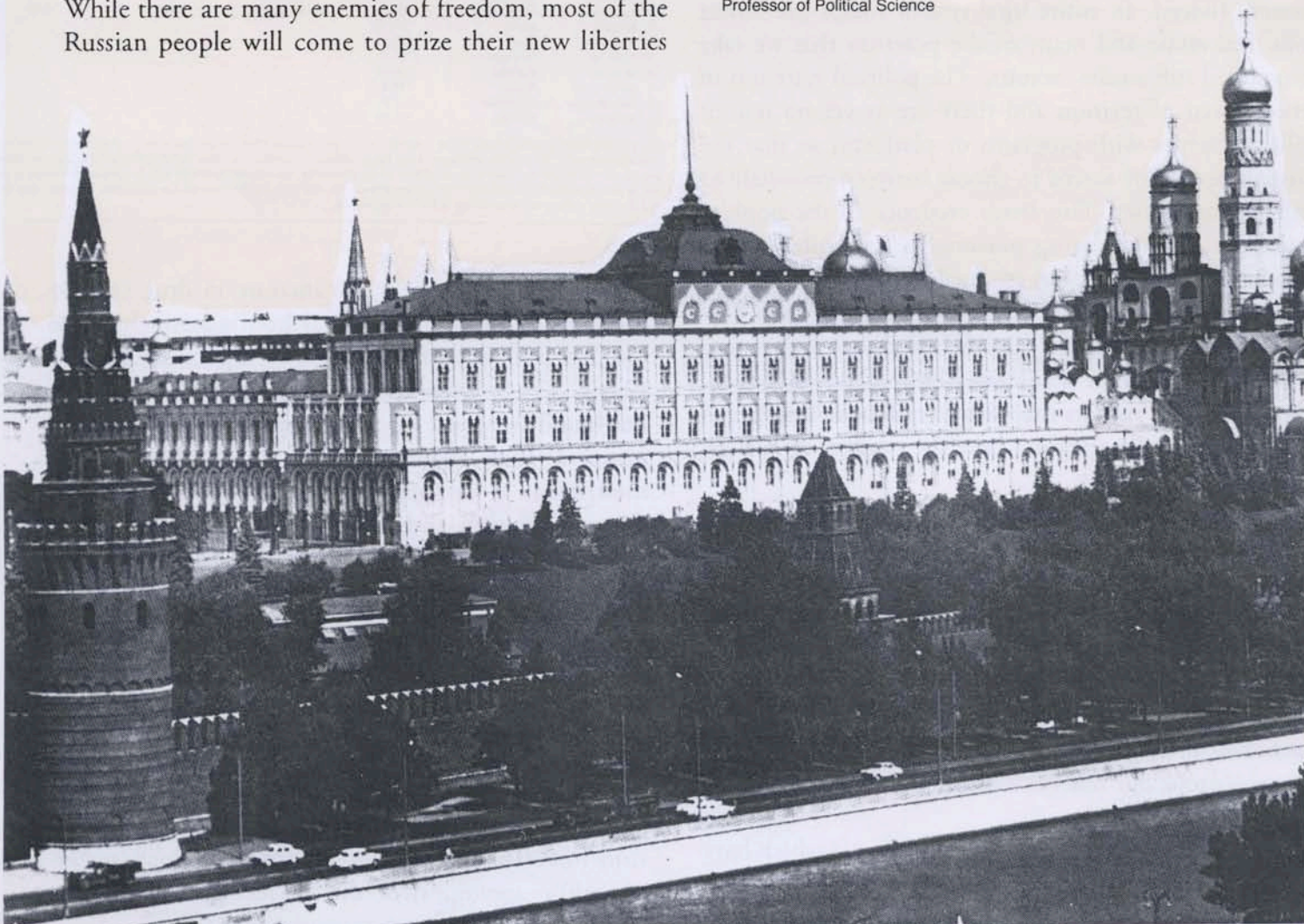
Nevertheless, there is an air of uneasiness because of a recalcitrant parliament which refused to go along with many of Yeltsin's proposals. Constantly hamstrung by this gridlock, Yeltsin and his advisors could not make progress. That is why new elections and a new constitution should provide the confidence needed for the next major push towards a truly capitalistic environment.

What of the future? There is an old proverb that says, "Once learned, democracy is not easily abandoned." Although we have only seen a brief example of democracy in Russia, I believe that it is there to stay. While there are many enemies of freedom, most of the Russian people will come to prize their new liberties

above all else. Russian intellectuals study western democratic institutions and ideas, especially in the United States. They have been profoundly influenced by what they have seen here.

Some fear that a renascent Russia under a more authoritarian system will once again seek to reestablish the Russian empire. Their fear that Russia will begin to throw its weight around once again in central Europe or in the Middle East is a valid one if the hard liners and chauvinists gain control. However, the world has shrunk and unless we truly believe that history repeats itself, we should not follow the nay-sayers. On the contrary, I believe that once the present troubles have ended, Russia and her neighbors will have a harmonious relationship with the rest of the world and become an important force for peace. What the world awaits is a viable government and political system for Russia that can truly make a difference in the quality of life for its people. The United States must do all it can to encourage the development of a democratic system in Russia if a new cold war is to be avoided.

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Professor of Political Science



Moscow: The Kremlin from the Moska River

B Y H E N R Y D A L E Y

the CHEMISTRY of ALLERGIES



Illustration by Miriam Walsh

Each year in the United States, over 5000 people die from bronchial asthma, 40 from insect stings, and around 300 from ordinary doses of penicillin. The reason: allergies. Allergies are the fourth most common activity-limiting chronic disorder and may constitute the most prevalent disease found in the United States. It is estimated that over 20% of Americans suffer from allergic reactions sometime in their lives. The extent of this reaction can be very mild to life-threatening. In fact some reactions are so mild that the person having the reaction may not be aware that he or she is experiencing one.

What is an allergy?



The answer to the question, exactly what an allergy is, is not known. What is known is that some peoples' bodies overreact to the presence of certain substances. These substances produce no ill effect in most humans.

The chemical basis of the human body's ability to overcome diseases is the production of antibodies. These are complex protein structures known as globulins. There are three basic types of globulins alpha, beta, and gamma. Most antibody molecules are gamma globulins. Because of their relationship to the immune system, they are also known as immunoglobulins and are given the symbol Ig. There are five different types of immunoglobulins: IgA, IgD, IgE, IgG, and IgM. Those associated with allergic reactions are mainly of the type IgE.

Substances that stimulate the production of antibodies are called antigens. Antigens are usually proteins or complex protein carbohydrate structures. In allergic reactions, these antigens are a small part of the substance that has entered the body and caused the reaction. Examples of these substances (which are called allergens,) include dust, pollen, and insect venom. The term allergen is also sometimes used in place of antigen. In ragweed, the chief antigen represents about 0.5% of the total mass of the solid in the pollen. It is known as antigen E. An injection of 1×10^{-12} grams of antigen E is enough to cause a response in allergic people.

Cells in the body analyze these antigens and transfer information about them to other cells that produce the antibodies. These antibodies attack a specific antigen and have little or no effect on other antigens. The antibodies remain in the bloodstream after the antigen is removed. The IgE antibodies are responsible for many of the most common allergic reactions such as hay fever, asthma, anaphylaxis, hives and eczema.

No one is born with IgE antibodies in their body. When first exposed to an allergen, it takes about 10 days before the IgE is developed. By this time the allergen is gone so no allergic reaction occurs. A second or later exposure to the allergen causes the allergic reaction. It takes repeated exposures to allergens for people to develop an allergy.

The Role of IgE



IgE is not a single protein structure (molecule), but a class of molecules each having a slightly different structure. Each molecule reacts with a specific antigen. This is why people have specific allergies. The IgE that reacts with ragweed is not the same form of IgE that reacts with the antigen from a bee sting.

IgE is present in the body in extremely small amounts, about 1 part per million in blood plasma. People who have allergic reactions have more IgE present than normal. For example, a person with allergic asthma has six times as much IgE as one with non-allergic asthma and those who suffer from hay fever have 14 times as much IgE as non-allergic people.

The tail of an IgE molecule (which is Y shaped) attaches itself to certain cells in the body known as mast cells. A single mast cell can bind more than 100,000 IgE molecules. Within the mast cells are granules that contain chemicals known as mediators. When an allergen combines with an IgE molecule on the mast cell, the mediators are released. Although numerous different chemicals are present as mediators, only two of them appear to play a role in human allergies. These are known as histamine and slow reacting substance (SRA-A). Of these two, histamine is the chemical responsible for the side reactions we associate with allergies such as itching, swelling, and runny-nose.

Basic Types of Allergies



There are four ways in which allergens invade our bodies. They can be (a) inhaled, (b) ingested (eaten or drunk), (c) touched (skin contact), and (d) injected (sting or bite). Once the allergen is present in the body, there are two different types of allergic reactions. They are classified as immediate or delayed, depending upon the time it takes for the allergic reaction to appear.

An immediate reaction is one in which symptoms appear within minutes after exposure to the allergen. Where as in a delayed reaction it takes at least four hours or sometimes even days after exposure for the symptoms to appear. Typical of delayed reactions are

contact allergies such as perfumes in soaps, poison ivy, and organ rejections.

Different mechanisms are at work in the two types of allergic reactions. The mechanism described above applies to immediate allergic reactions. However in delayed reactions, no antibodies are found in the blood; instead delayed reactions are believed to be mediated by cells. Many of the delayed reactions involve the other types of immunoglobins. IgG is involved in the Rh factor associated with newborns and with allergic pneumonia. IgA and IgM have been associated with allergic reactions involving blood vessels and the kidneys. Both IgA and IgE are involved with food allergies which usually occur in people who lack IgA. IgA blocks food allergies by combining with the allergen associated with these allergies.

Although it is often assumed that certain types of allergic reactions can be triggered by stress and emotional reactions, this is not true. Stress and emotions can intensify a reaction, especially in bronchial asthma and hay fever but cannot initiate a reaction. However, there is a correlation between heredity and allergies. If one of your parents has allergies, there is a better than normal chance that you will have an allergy. If both your parents have allergies your chance of having similar allergies is about 80%, although it may not necessarily be the same allergy as your parents.

Antihistamines	
Generic name	Brand Name
Astemizole	Hismanal
Brompheniramine	Dimetane
	Sinusol-B
	Generic
Chlorpheniramine	15 different brand names
	Chlor-Trimeton
	Generic
Dimenhydrinate	20 different brand names
	Dimetabs
	Dramamine
Diphenhydramine	18 different brand names
	Benadryl
	Nytol with DPH
	Sominex Formula-2
Terfenadine	48 different brand names
TriPelennamine	Seldane
	PBZ
	(Pyrobenzamine)
Tripolidene	Pseudophred

Illustration by Laurel Lawson



The Role of Histamine

Histamine, formed by the breakdown of a common amino acid known as histidine, is found in high concentrations in the granules in mast cells, and is released as the granules move to the outer edge of the mast cell. They discharge the histamine through a temporary gap in the cell membrane.

In immediate reactions, histamine can account for many, if not all, of the symptoms associated with an allergic reaction. Histamine causes dilation of the blood vessels and increases the ability of blood fluids to leak out of capillaries. These fluids are responsible for the swelling of tissues. Histamine also causes contraction and swelling of the smooth muscles, stimulates the production of saliva, tears and secretes mucus. It can also cause a large drop in blood pressure and produce a condition known as anaphylactic shock, leading to death.

Treatment of Allergies



Three procedures are used in the treatment of allergies: (a) avoidance, (b) desensitization, and (c) chemicals. Once a person knows what material he/she is allergic to, the best treatment is to avoid the allergen as much as possible. In some cases it would seem that moving to a different part of the country might help, especially with pollen allergies, but in general this does not work. People with hay fever who move from a part of the country high in pollen to one low in pollen often develop an allergy to the different pollens found in their new home.

Desensitization therapy involves the injection of an increasing amount of allergen if the person has a high IgE concentration. The modern term for desensitization is hyposensitization, which means reduced sensitivity. Small amounts of allergen are injected over a period of weeks. Benefits are not apparent until six to twelve months of treatment. Injections should be given in a doctor's office because of the possibility of a severe reaction (anaphylaxis) to the injection. It may seem strange to inject a person with the same allergen that is causing the problem, but the procedure appears to work by increasing the amount of IgG antibodies in the body. These antibodies block the combination of the allergen with IgE, preventing the release of the chemical mediators. This procedure is particularly useful for allergies to bee, hornet, and wasp stings, and is effective for pollen allergies.

Chemical treatment involves three different classes of drugs: Epinephrine (adrenaline), steroids, and antihistamines.

Antihistamines



Antihistamines are probably the best known and most widely distributed class of chemicals used to relieve the symptoms of allergies. Over 50 different antihistamines are available in the United States,

often combined with decongestants or analgesics in cough medicines.

Antihistamines do not cure allergies. They work by competing with histamine for sites on cells. By blocking the histamine from these sites they prevent the swelling, itching and other symptoms associated with the reaction of histamine with the cells. The early histamines can pass through the brain membrane and cause drowsiness, which has led to their use as sleeping medications. Two of the newer antihistamines, astemizole and terfenadine, cannot cross this barrier, and thus do not cause drowsiness. Other serious side effects have recently been associated with these antihistamines.

The reason there are so many antihistamines is that each affects different people in various ways. Only by working with your doctor can you determine which is the best for you to take.



Epinephrine

Epinephrine (adrenaline) was the first strong drug sold for the treatment of allergies. It relaxes the muscles in the bronchi and thus is effective in bronchial asthma. When people are rushed to the hospital with a severe allergic reaction, epinephrine is injected. This has saved the lives of many people who have suffered anaphylactic shock due to a reaction to an allergen. Epinephrine is known as a sympathomimetic drug, as it stimulates the sympathetic nervous system along with relaxing the smooth muscles.

Numerous other compounds are also used as sympathomimetic chemicals: better known are noradrenaline (norepinephrine), ephedrine and isoproterenol. The xanthines and theophylline are similar. Theophylline is often used in inhalants as a bronchial dilator. It is also used to determine lung capacity. Some patients with bronchial problems feel they can breathe better after drinking a cup of coffee. This happens because theophylline is one of the hundreds of chemicals found in the vapor of coffee.

Steroids



Adrenocorticoids (corticosteroids) are also very important in treating allergies. Some of the more common steroid drugs used are hydrocortisone, prednisone, betamethasone, triamcinolone, and flucinolone. They help relieve the redness, swelling and itching associated with allergic reactions and are especially useful for bronchial asthma, hives, eye disorders, and eczema. Steroids reduce the swelling and fluid build-up associated with the allergic reactions and are so powerful they may be used in severe cases of bronchial asthma.



Henry Daley is Professor of Chemistry

To learn more about allergies and the drugs that are available to combat allergies the following research guides are invaluable: The Complete Drug Reference, Consumer Reports Books, United States Pharmacopoeia, 1992 and Allergy: Its Mysterious Causes and Modern Treatment, The Allergy Foundation of America, Grosset and Dunlap, also see Chemical & Engineering News "Allergy, A Protective Mechanism Out of Control," May 11, 1970 pp 84-132. For those of you who suffer from allergies, remember, significant strides have been made and will continue to be made to help you face up to the watery eyes, the sneezing, the general discomfort and in some cases the danger associated with allergic reactions.

A TALE ^{of} TWO BOROUGHS

PATTERNS OF TRADE IN PREHISTORIC NEW ENGLAND

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness... it was the spring of hope, it was the winter of despair."

With these words, Charles Dickens opens his exploration of social inequalities in late 19th century western Europe. The subject of social inequality and its consequences for human cultures is only now beginning to receive due attention in American archaeology.

While archaeologists would have little trouble in recognizing its traces in the material culture of 19th century France or England, or even in their North American colonies, readers might be surprised to learn that egalitarian social structures were also present in prehistoric New World contexts. In New England, the beginnings of inequality are as old as the period local archaeologists call the Transitional Archaic, from about 4000 to 2500 years ago. Even more surprising, it looks as if the kind of dichotomous relationships Dickens portrayed disappeared after this period, to be replaced by a more simplistic social order. This development has potentially profound implications for our understanding of human behavior.

In order to approach this subject, I have adopted a theoretical perspective known as structuralism, in which social customs such as burial rituals are viewed as evidence of structural conflicts within the society. Specifically, I have explored the relationships between lowlands and uplands in southern New England in terms of a center-periphery model. In this model, some favored areas (centers) attract larger settlements and become political and economic centers of influence, while other areas (peripheries) are less favored, have smaller populations, and are susceptible to being exploited by the centers. Moreover, both center and periphery have their own local centers and peripheries. This model is a prescription for social inequality, because it sets up tensions between the advantaged centers and the disadvantaged peripheries, usually at the expense of the latter. I also argue that the solution to this social tension developed by the New England Native Americans amounted to a rejection of the political and economic importance of centers. This philosophical position persisted at least until the time of European contact, and still colors the perceptions and

actions of Native peoples today.

The data I have used to test this model derives from regional archaeological studies I have directed in two towns in eastern Massachusetts, Middleborough and Westborough. Much of this work has been done by students in the Public Archaeology Concentration at Bridgewater, taking internships and directed studies over the past 10 years. As a result, few towns in the region have been as thoroughly studied at the town level, and the striking contrast between upland and lowland locations is well illustrated by the two relatively complete data sets. While the current state of analysis is descriptive rather than statistically quantitative, it still provides a reasonably clear picture. The use of statistics in archaeology, as in all the social sciences, should not be undertaken until the researcher is well acquainted with the nature of the sampling universe; that point has yet to be reached in this study.

Middleborough is located on the coastal plain, and is drained by the Taunton, Weweantic, and Sippican Rivers. The Nemasket River, which runs from the Lakeville Ponds through the center of the town, is a major tributary of the Taunton River, which forms the town's northern boundary. Most of the terrain is relatively flat, with some large basins currently occupied by swamps, punctuated by low hills. Most of the archaeological fieldwork has concentrated on Assawompsett Pond and the rivers, but our concentrated inventory of public and private artifact collections in 1991-92 identified a total of 166 sites scattered throughout the town, 22 of which have been excavated with reasonably good records. The inventory currently includes 5337 artifacts.

Westborough is located at the eastern edge of the Worcester Plateau, and contains the headwaters of the Sudbury, Assabet, and Blackstone Rivers. The land area of the modern town is marked by three large former lake basins surrounded by moderate slopes which act as watersheds between the drainage systems. Most archaeological work has concentrated on the fringes of the lake basins, resulting in a sample of 74 sites, 28 of which have been field tested, and a sample of 6002 artifacts.

Archaeologists generally agree that the following criteria mark Transitional Archaic sites:

- 1) Radiocarbon dates in the range of 4000 - 2500

By Curtiss Hoffman

years ago;

2) Relatively large, stemmed spear points or lance points (the arrow had not yet been introduced) of various subtypes;

3) Certain ground stone tools, including clumsy plummets, gouges, celts, full-grooved axes, winged or whaletail shaped spear-thrower weights and pestles;

4) Bowls carved out of soft stones, particularly steatite (soapstone) or chlorite;

5) The use of large slabs, either as anvils/nut-cracking stones or for the lining of pits;

6) Cremation burials with associated deposits of red ochre powder and large ceremonial blades made of stone derived from distant sources;

7) Unusual items such as "magic stones", pendants, and petroglyphs (carved artistic representations);

8) Evidence of complex village structure;

9) Evidence of trade, both intra- and inter-regional in scope.

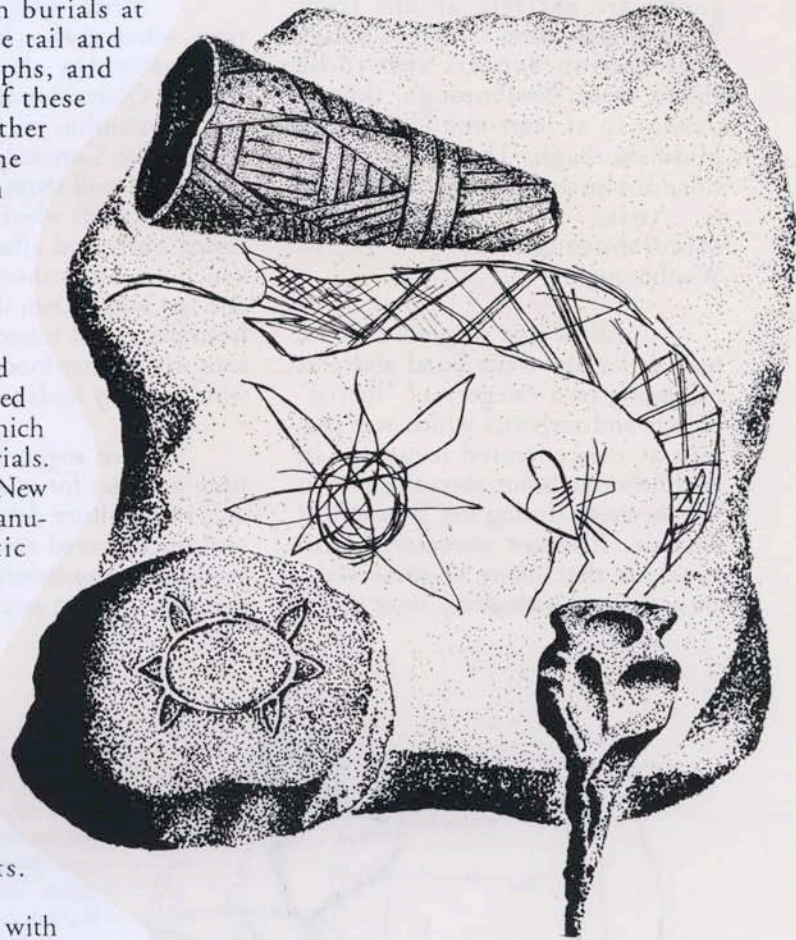
We have found all nine of these criteria associated with sites in Middleborough. Six of the eight radiocarbon dates from the Wapanucket 8 site on Assawompsett Pond fall within the desired range. A total of 144 spear and lance points of Transitional Archaic types and 114 ground stone tools have been found. Stone bowls and bowl fragments are less common (19). Five slabs used as anvils are reported; slabs were found in ceremonial burials at Wapanucket only, but in great abundance. These burials are complex cremations accompanied by red ochre and grave goods, including 33

ceremonial blades, 20 of which are of exotic stone materials. Burials at other sites appear to be less complex, but 5 are associated with ceremonial blades, which also occur as isolated finds. Nineteen unusual objects found in association with burials at Wapanucket include whale tail and other pendants, petroglyphs, and magic stones. Nineteen of these have also been found at other locations, mostly along the Nemasket and Taunton Rivers. Complex village structure is well documented at Wapanucket, where three circular dwelling complexes were delineated on the basis of post mold patterns. Each circle contained a larger central structure which was the repository for burials. Finally, exotic stones from New York sources used for the manufacture of diagnostic Transitional Archaic points and ceremonial blades are 26% of the total.

Percentages for ceremonial points are much higher, 59%. Stones from Boston Basin quarries accounted for an additional 64% of the points.

Sixteen out of the 31 sites with any of these nine traits have multiple traits, though Wapanucket is the only site at which all have been found, due to the greater area exposed by excavation.

Four radiocarbon dates from Westborough fall within the stipulated range. Spear and lance points of Transitional Archaic types are less than a third as common as in Middleborough (45). Ground stone tools are also less common, 37 items in all. Twenty-one slabs used for anvils have been recovered, but none are from ceremonial contexts. Steatite bowls, red ochre burials, ceremonial blades, and most of the unusual items are altogether absent from Westborough sites of this phase. Complex village



References used in the illustrations supplied by William S. Fowler of the Massachusetts Archeological Society.

structure also appears to be absent, although a single large dwelling of the size found at Wapanucket has been recovered at the Charlestown Meadows site. Trade was mostly intra-regional; 62% of diagnostic Transitional Archaic points were made from Boston Basin lithics, while only 13% are of exotic materials. 10 of the 16 sites with any of these traits had more than one trait represented, though Charlestown Meadows was the only one to display all 6 of the traits present at Westborough sites, once again probably due to the greater exposure.

There are several ways in which the data sets from these two towns are similar. For example, Boston Basin felsites and argillites were used to make points in very similar proportions, and exotic lithics were found at a similar percentage of sites. All the subtypes of spearpoints were also found in both towns. This suggests a measure of continuity between the two areas.

However, emphasizing these similarities would obscure the significant differences between the two towns. The number of ground stone tools is higher in Middleborough, but they constitute a much smaller per-

centage of the total found than in Westborough. Anvil slabs are more common in Westborough, but ceremonial slabs are found only in Middleborough. Ceremonial burials, large ceremonial blades, steatite bowls, and most of the unusual goods are entirely absent from Westborough sites. Complex village organization appears also to be absent from Westborough, though present in at least one location in Middleborough. The use of exotic stone materials for diagnostic points is twice as frequent in Middleborough as it is in Westborough.

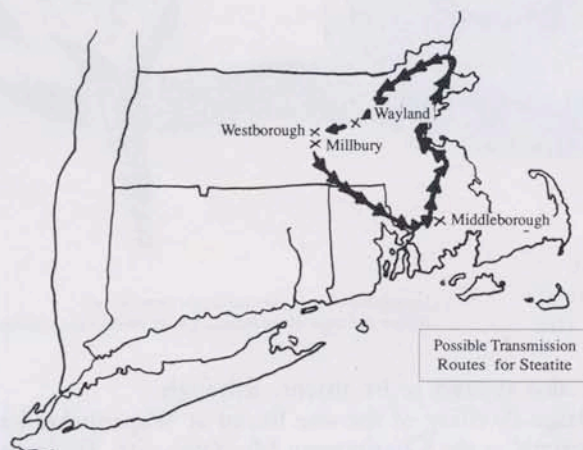
All of this suggests that we may define the traits listed above as belonging to a category of "special" objects and activities which was present at concentrated locations in Middleborough but absent or rare in Westborough during the Transitional Archaic. It is not unreasonable to conclude that many of these traits are associated with elites, since exotic

the region are located in the Blackstone drainage in northern Rhode Island and southern Massachusetts. While steatite from these sources moved down the river and across the coastal plain to Middleborough and other locations during the Transitional Archaic period, only a few scraps have ever been found in much later contexts in Westborough, probably fragments from the stone pipe industry. Steatite apparently did not cross eastwards over the watershed from neighboring Grafton into Westborough during the Transitional Archaic.

Stone bowls do not obviously relate to elites, so we ought to ask the question, what made them useful for river-dwellers but not for the uplanders? Presumably they are somehow related to food — either for cooking or long-term storage. Quantities of charred wild seeds — of *Chenopodium* sp. (lambquarters) and *Amaranthus* sp. (pigweed) — have been recovered from Transitional Archaic sites in the Connecticut River floodplain. While we consider these plants to be weeds and pull them out of our gardens, they grow well in soft soils and produce abundant seeds which contain complete protein in late summer. They may be harvested easily and efficiently by foraging groups, but they are rather tasteless foods which are best consumed in a mush or gruel with other flavors. This gruel could also last longer than the usual suite of foraged foods if kept in large containers away from pests, and stored foods could have helped to sustain populations over the seasons when other foods were scarce, allowing for the stabilization of the food supply, which usually leads to quick population growth.

This suggests that the collection and bulk processing of seeds may have been a reason for using steatite bowls. Societies on the transition between foraging and horticulture developed seed collecting as an intermediate strategy in several well-documented cases in the Middle East and Mesoamerica. In those locations, increasing populations made a shift from day-to-day foraging to intensive collecting necessary — and population increase is one possible reason for changes in political

organization from egalitarian to inequalitarian systems. The number of radiocarbon dated sites from about 4500 to 2500 years ago in southern New England increased tenfold, and the average location of sites within their drainages moved steadily upstream, suggesting a gradual filling up of the available territorial space.



We should not think of Middleborough as the end-point in this process; trade probably continued up the Taunton River and across into the North River and Weymouth Fore and Back Rivers to Boston Harbor, and then up the coast. Some of this material may have then moved upstream along the Merrimack River and its tributaries, to a well-documented center at Mansion Inn in Wayland.

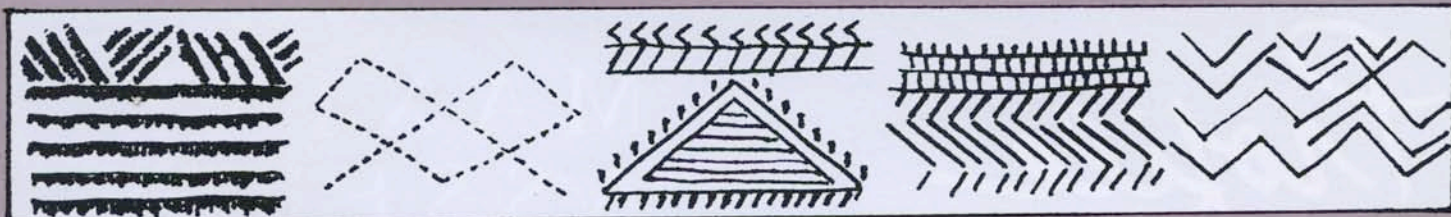
However there is one problem with this argument in connection with the use of steatite bowls. In New England the places where the seed plants grow wild in abundance and the places where steatite is available are usually not the same. In order to make this seed-collecting and storage strategy work in the region, collectors in the lowlands either would have to dispatch task groups to

objects are used by elites selectively in many parts of the world to demonstrate their status-difference from the rest of society. By contrast, there is also a category of Transitional Archaic artifacts which were similarly distributed in the two towns, including projectile points and ground stone tools. These may be interpreted as utilitarian objects that would not be associated with elite status.

However, there is something rather peculiar about this set of differences, and it hinges upon the presence or absence of steatite bowls. The best-known steatite quarries in

distant steatite sources, or to develop trade connections with the uplanders. In the smaller tribal territories which seem to characterize the Transitional Archaic, the latter solution might have been the only option. The regulation of trade between groups is yet another reason to change to a political structure run by so-called "big men". The trade in exotic stones for use in lowland burial ceremonies also suggests this type of reorganization.

The next question which needs to be addressed is, what did the lowlanders have to offer the uplanders in return for steatite? Traditionally in these situations, participation in complex ceremonies and some access to high-status goods are offered. There is some evidence that such exchanges did take place in southern Worcester County, as a burial site in Millbury, just across the watershed from Westborough, contains the complete set of "special" traits, even including a copper knife blade derived from far-off Lake Superior. However, another resource that can be traded in from the lowlands is stone; specifically, the Boston basin stones that are common in both Middleborough and Westborough. Prior to the Transitional Archaic period, there is some evidence that stone exchange was already taking place between the two areas. Specifically, there are similar proportions of



Westborough quartzite in sites in the Blue Hills and Blue Hills felsite in Westborough sites. Quartzite is also present in Middleborough assemblages during this earlier phase, but it was hardly used at all in the Transitional Archaic. This suggests a possible reason for the absence of "special" goods in Westborough during this phase: they lacked steatite, and the quartzite was no longer in demand.

This, then, is the argument for the center-periphery model in the Transitional Archaic. Middleborough was clearly a center area, gifted with a mild climate and abundant water resources, and river flood plains that could conceivably have been used for gathering wild seed plants. In the developing social inequality of the Transitional Archaic, some of its residents in these favored areas enjoyed the privileges associated with center centers: enhanced status, special, exotic artifacts, and special treatment after death. There are also sites in Middleborough without burial materials or special goods, but these were located at a greater distance from the rivers or ponds, and these may have been part of the center periphery: geographically and economically tied to the center but not enjoying its privileges of status.

Sites in the uplands related to the steatite extraction industry, especially those at which ceremonial burials are found, may be characterized as periphery centers. Their inhabitants supplied the wealthier lowlanders with the finished products of steatite needed for their economy, and in return may have received enough of the benefits to be able to host an occasional ceremonial.

However, Westborough, at the extreme southwestern limit of the Merrimack drainage, received little if any of this material and remained on the outskirts of the Periphery. With essentially nothing to offer the lowlands of economic importance, it became a place of cultural conservatism for the rest of prehistory. Whatever relationship the Transitional Archaic inhabitants of Westborough may have had with their immediate neighbors to the southwest, it was not a relationship between equals; they were not participating in managing the exploitation of steatite, and they were there-

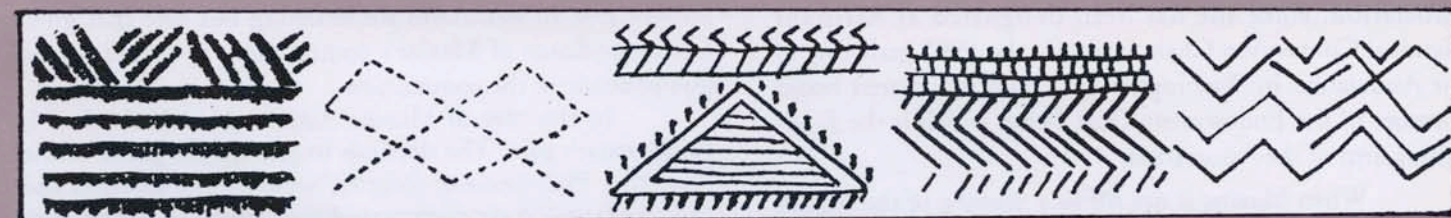
fore not in a position to benefit from this activity economically, either by trade of status goods and ceremonies, or the new foodstuffs. The model would predict that they were involved in the actual extraction of steatite, which was a labor-intensive and potentially hazardous undertaking.



In other parts of the world, the inception of elites and economic strategies based on exploitation was often followed by rapid growth into complex societies sustained by an agricultural economy. This clearly did not happen at this point in New England prehistory, so we must consider a second alternative: collapse. The succeeding Early Woodland period (2500 - 1500 years ago) saw a dramatic reduction in both the complexity and frequency of ceremonial burial practices in the region. With a few exceptions, burials from this time up to the first century of European contact were plain and accompanied by few if any special grave goods. Trade in exotic stones was leveled out across the region as compared to the preceding period. The regional materials which were so important to the Transitional Archaic continued to be produced at the same rate in Middleborough

but were much diminished in Westborough. Steatite production appears to have ceased after about 700 B.C., except for smoking pipes. In addition, the average location of sites within drainages and the absolute re-number of radiocarbon dated sites decreased markedly throughout the region around 2600 years ago. Some authors think this indicates a population collapse to concentrated coastal settlements. But Middleborough sites continued in the traditional center areas, very similar to the Transitional Archaic settlement patterns. Most of the Westborough sites of this phase appear to be multi-seasonal camps with high proportions of local stones, including inferior granites. The sites were closer to the centers of the lake basins, and in general have an inward-looking character. This evidence does not support the theory of a population collapse, but a shift in the relationship between uplands and lowlands from dependency to greater isolation. To paraphrase Yeats, the center did not hold.

Curtiss Hoffman is Professor of Anthropology



Profile

MAXINE ASSELIN

The roads that bring faculty to Bridgewater State are many and varied.

In the case of Professor Maxine Asselin of the Music Department, the journey begins in New York City. After receiving her Masters Degree from the Manhattan School of Music, Maxine was taken under the wing of Hugh Ross, one of the leading choral directors in the world, and thrust into the front ranks of the New York music scene. Maxine quickly found herself singing with the New York Philharmonic Choir under the direction of Leonard Bernstein. The work with the Philharmonic led to other professional opportunities, including recording with the popular Robert Shaw Chorale.

But despite the excitement of singing with some of the world's top chorales, Maxine yearned to bring her love of music to young people. So it was off to the University of Connecticut and the pursuit of a Ph.D. in Music Education. After successfully completing her degree, Maxine headed for Bridgewater where she was immediately given the responsibility of directing the Women's Glee Club. Gradually she was drawn to chorale directing and membership in the American Choral Directors Association (ACDA). Maxine's involvement in the ACDA would grow and shape her professional life.

For the most of the 1980s Maxine expanded her involvement in the ACDA to the point where she was elected state president and later Eastern division president. Recently, Maxine mounted an unsuccessful campaign for national president, but it has not deterred her interest in the association, since she has been designated as Assistant National Convention Chairperson for the 1995 gathering of the Association in Washington D.C. and is a charter board member of the Endowment Trust Fund, which is the fund-raising arm of the Association.

When Maxine is not off to a meeting of the ACDA she is leading the premier choir in southeastern Massachusetts, the Jubilate Chorale. From a membership of thirty-six singers in 1982, Maxine has transformed the

Jubilate Chorale into a nearly eighty member group that has been on three European tours, including a personal invitation from the government of Denmark. The Jubilate Chorale, which is based in Brockton, performs regularly in the region to rave reviews and strong citizen support.

Maxine's considerable professional and community involvement is balanced by her role as music instructor and chair of the Music Department at the college. Maxine teaches a broad range of courses from voice to music listening to piano. She is also leading the Music Department on a new venture as the new Music major gets off the ground. From its inception in 1989, the Music major this year has a complement of forty majors and signs that the growth is only beginning.

The management of a growing major and a growing department take up a considerable amount of Maxine's time, but the work entailed in developing a new major leaves her undaunted. In fact Maxine is overjoyed at the success of Music and the new initiatives that are on the horizon including work on a music education certification program from nursery through ninth grade and the arrival on campus of a new football band to enliven the crowds at Bridgewater State football games. Although Maxine shies away from taking credit for the success of Music at Bridgewater, it is clear that her energy and professional reputation have contributed significantly to the advancement of both the major and the status of the department on the campus.

As with any busy faculty member, Maxine is looking forward to new challenges. She will direct a major choral work, Mendelson's *Elijah*, in the spring at St. Nicolas Catholic Church in Brockton. Funded through the Massachusetts Arts Lottery and local fund-raising, the performance is an enormous undertaking but one that gives further evidence of Maxine's commitment to spreading the joys of music in the community.

In the case of Maxine Asselin, New York's loss is Bridgewater's gain. The decision to give up the glitter of the New York Philharmonic to bring music to the students and the residents of southeastern Massachusetts is one that Maxine never regrets. Bridgewater State is indeed fortunate to have in its midst a tireless promoter of the arts and a caring mentor of students.



Profile

RICHARD CALUSDIAN

Not since the Sputnik era of the 1950's has science education been elevated to a position of prominence in our schools. Here at Bridgewater Physics professor Richard Calusdian is in the front ranks of those educators trying to broaden the skills of science teachers and advance science education for students of the 21st century.

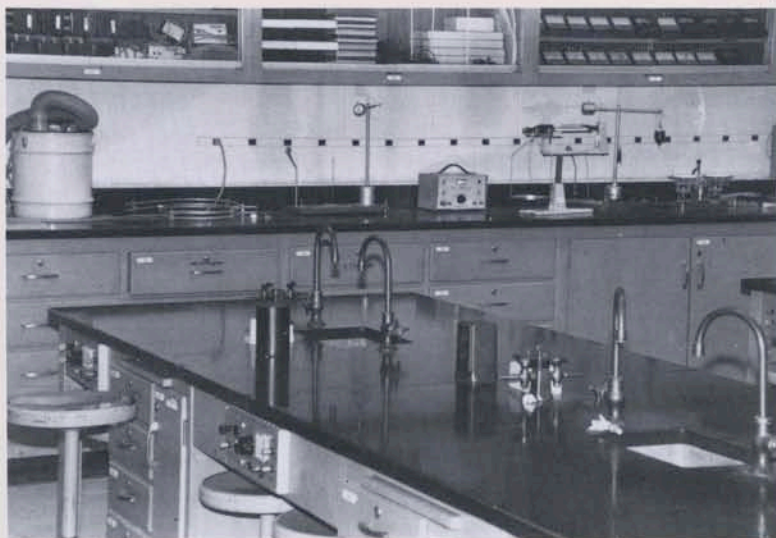
Dick Calusdian is currently working with Chemistry Professor Henry Daley and Mathematics Professor Jean Prendergast on a three year National Science Foundation Grant to teach science education to middle school and high school instructors. For the last three summers, Dick has conducted classes in astronomy and electricity at the college as a way of rekindling interest in physics. As Dick quickly points out, there is a crying need to reemphasize the importance of physics and to encourage students to become involved in the study of physics. Unfortunately, today's students grow up in a culture where physics is not encouraged and where there is a resulting fear of studying a discipline that is viewed as difficult.

Dick Calusdian's passion for spreading the word about physics and science education began in high school in Watertown where, as a student of future Bridgewater State professor Robert MacCurdy, he developed a deep interest in studying the basic laws of nature. After gaining his bachelor's degree at Harvard, a Masters at the University of New Hampshire and a Ph.D. at Boston University, Dick worked for a time at the Watertown Arsenal and the U.S. Army Natick Lab doing solid state physics for the United States Army. But as with many Bridgewater faculty, Dick longed to get into the classroom and share his love of physics with students. In 1966 Dick arrived at Bridgewater as chair of the Physics Department, a position he held till 1988. In his years at Bridgewater, Dick Calusdian has gained a reputation as a champion of physics and a mentor to numerous students, many of whom have gone on to successful careers as engineers, scientists and educators.

After spending twenty-seven years on the Bridgewater faculty Dick speaks with authority on the state of science education at the college and the interest of students in physics. Dick makes the comparison of science education in Asia and in the United States and sees the Asian culture as more receptive to the study of science. In Dick's view, the people of Asia see man as part of nature and therefore are more interested in the various fields of science, while American culture often stresses man being apart from nature, therefore distancing our people from science. Dick hopes that the recent recognition by educators of the need to bolster science education will renew interest in this vital area.

Although Dick is disappointed that the study of the basic laws of nature is not at center stage among the students of the 1990's, he remains upbeat and committed to advancing his passion. Dick is currently preparing to take a long deserved sabbatical in which he will study elementary particle physics and prepare a course in the topic when he returns to the classroom. To Dick, elementary particle physics is at the foundation of the laws of nature and a critical link to answering the questions of who we are. Like many students of elementary particle physics, Dick is deeply disappointed the congress stopped funding for the completion of the supercollider in Texas. Dick feels strongly that the collider, which was originally a multi-billion project designed to further define the fundamental elements of matter, is a critical technology that should be built.

The commitment of Dick Calusdian to physics and science education is reassuring in this era of a global economy when countries are scrambling to train scientists and engineers and gain that competitive edge. Dick may be fighting an uphill battle to reinvigorate the sciences in the classroom, but he is fighting and transmitting his spirit to a new generation of young people at Bridgewater State.



Photograph by Laurel Lawson

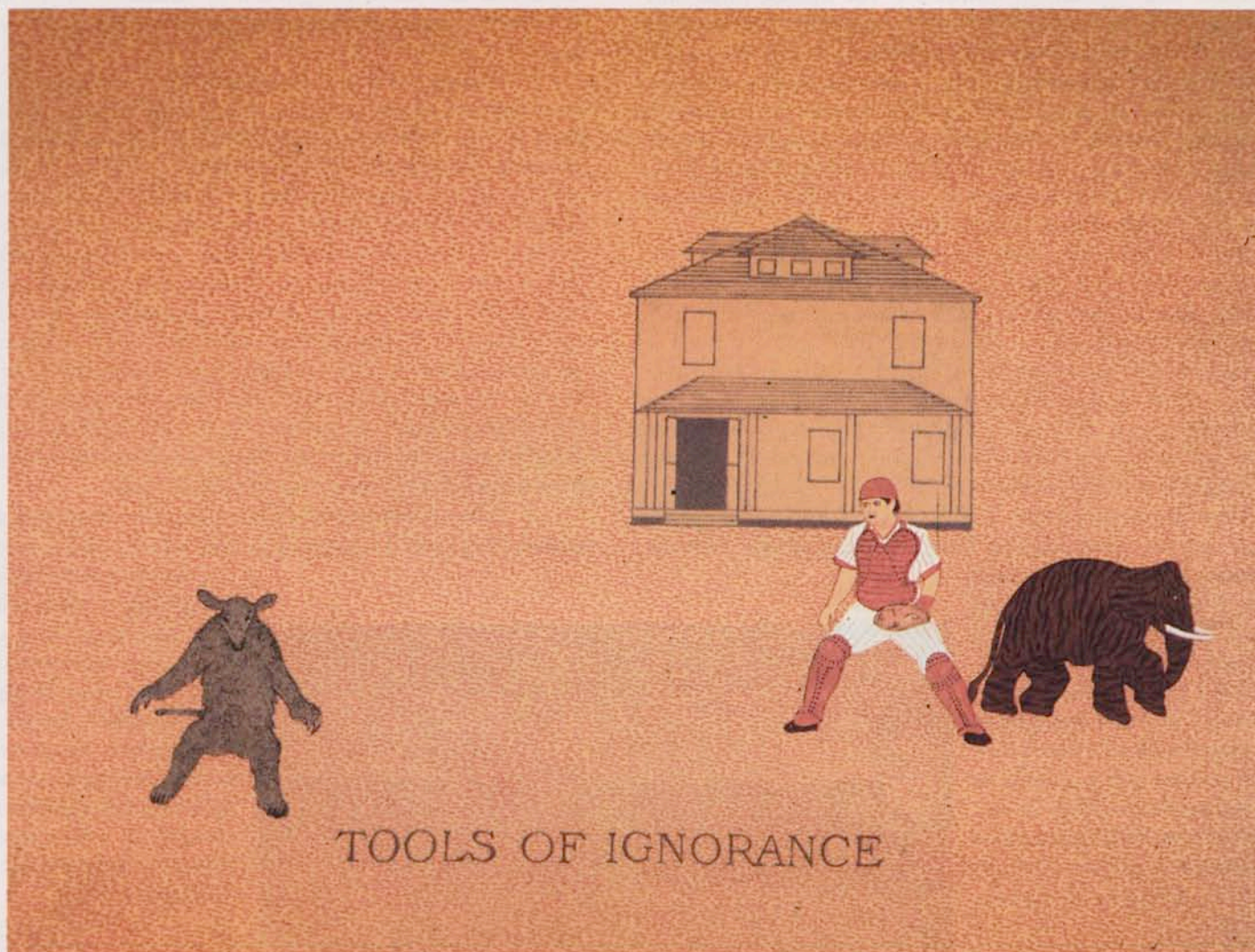
STEPHEN SMALLEY

Stephen F. Smalley has been an art faculty member at Bridgewater State College since 1972 and he continues to credit his career in art to rain, frogs, and baseball. He is currently expanding upon his Tools of Ignorance series (drawings and paintings) which focuses on Mickey Cochrane, a Bridgewater native and Hall of Fame catcher. His newer focus is upon luminaries in pop music.

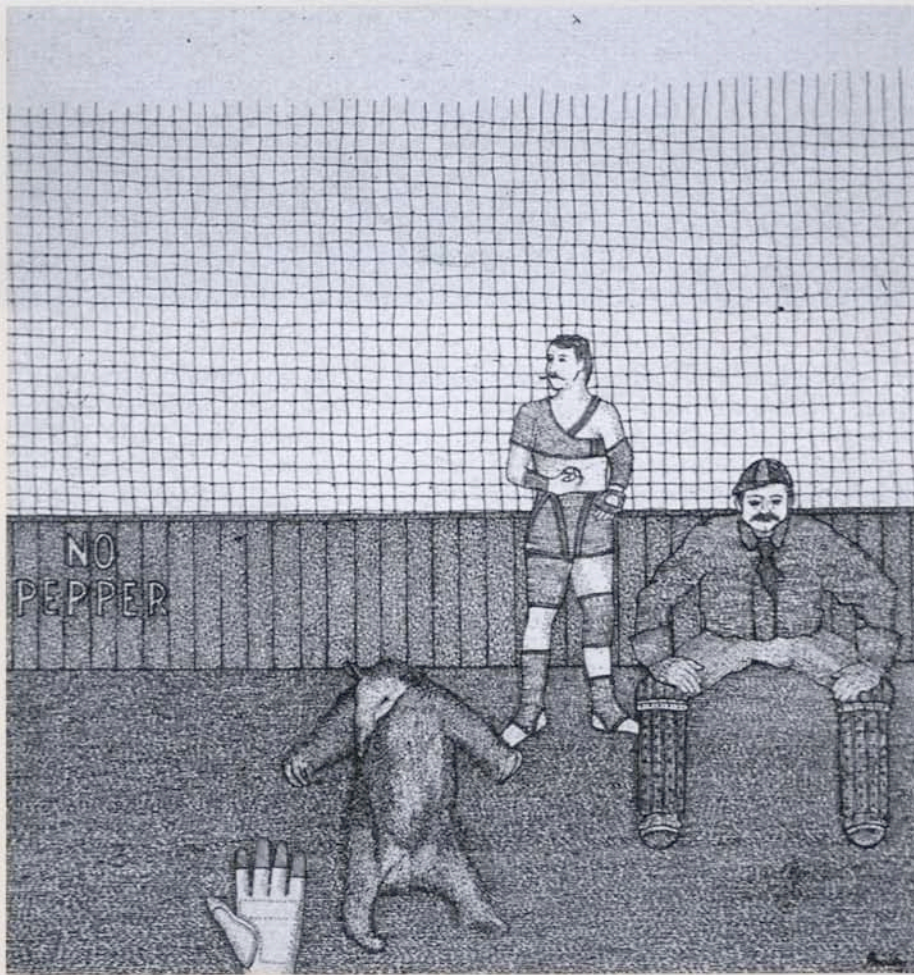
Dr. Smalley graduated from

Pennsylvania State University, Boston State College, and Massachusetts College of Art. From 1972 - 1984 he served as Bridgewater Art Department Chair. Prior to coming to Bridgewater he served as Art Education Chair at the Tyler School of Art, Temple University. He also taught high school art at Rindge Technical High School in Cambridge.

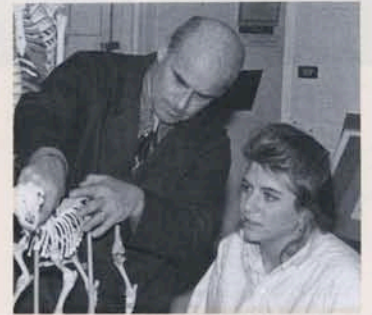
He is particularly interested in contemporary American and British Art and is ever partial to all things pop and the playing fields. He and his wife Clelia, parents of three grown children, reside in Bridgewater.



TOOLS OF IGNORANCE
1991
12" x 16"
acrylic on canvas



PEPPER TIPTOE
1991
9 1/2" x 9 1/2"
ink on fabiano paper
collection of Drs. Robert and Shari Thurer



CULTURAL DOUBLEHEADER
1991
14" x 18"
acrylic on canvas

Profile

MARGARET LANDMAN

Recently, there has been considerable discussion about the literacy (or rather, illiteracy) of typical Americans, where literacy is measured by the assessment of reading and mathematics skills. It seems that Americans are also illiterate in economics. According to a survey of 1600 people conducted by the Gallup Organization last year, stu-



dents and non-students can correctly answer basic economics questions, such as what is a government budget deficit and what does the Federal Reserve do, only about 40 percent of the time. Dr. Margaret Landman, Professor of Economics and Director of the newly-formed Center for Economic Education at Bridgewater State College, believes that knowledge of these and other fundamental economics concepts is important for individuals and businesses to make informed, intelligent choices about consumption, saving, investments, work, and voting. Promoting economic literacy throughout the region, therefore, is a primary goal of Bridgewater's Center for Economic Education.

Through her work at this Center, which is located in the Department of Economics in Tillinghast Hall, Margaret hopes to make information about economics programs and data available to educators and business leaders throughout southeastern Massachusetts. The Center's affiliation with the National Council on Economic Education, as well as with the state Council, provides it with access to a wealth of educational materials which are made available to all teachers of economics, from kindergarten through college. The Center is also working to update and expand its collection of economic data, so that it can serve as a resource center for local educators, businesses, and government agencies in need of information on local and national economic conditions and forecasts.

Last spring, the Center for Economic Education offered its first workshop on international economics for teachers and administrators. This one-day Saturday workshop was sponsored by the Center for the Advancement of Research and Teaching (CART), a Bridgewater State College institution established to support faculty projects. About 20 participants, representing a variety of subjects, grade levels, and local school districts, came to Bridgewater State College to learn about international trade and finance through discussion groups, guest speakers, and practice sessions with economic education materials. Some of these workshop participants have expressed an interest in continuing their involvement with Bridgewater State College.

For the future, Margaret is planning a number of activities to develop and expand the programs offered by the Center for Economic Education. While the College already provides some financial support for the Center, she will look to supplement this budget by applying for grants to support future workshops and seminars for teachers and business people. She also plans to attend and make presentations at professional conferences to increase the visibility of Bridgewater's economic education programs. In 1994, Margaret will be working with Dr. Vernon Domingo of the Earth Sciences and Geography Department and with Mr. George Watson, Director of the Economic Education Council of Massachusetts, to create economics and geography materi-

als for middle schools as part of a National Science Foundation CD-ROM project.

Margaret is currently in the process of recognizing and encouraging interested teachers and business leaders to become affiliated and involved with Bridgewater's Center. She welcomes suggestions and ideas from all members of the College community. Bridgewater State College has always been a leader in teacher education and, with its new programs on economic education, can look forward to becoming a strong contributor to regional economic education and development.

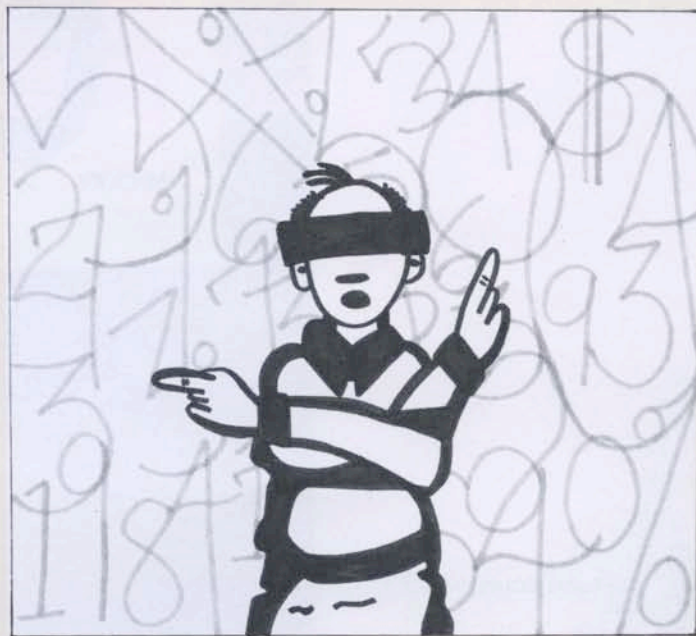


Illustration by Chris Lynch & Kristin Pomer
Photograph by Pam Flatley

Higher education, like many institutions in the United States, is undergoing profound change. At Bridgewater, faculty members are increasingly becoming aware that societal issues, computerization and the demands of a highly competitive economy require a reevaluation of the classroom and the process of

learning. At a conference sponsored by the Center for the Advancement of Research and Teaching in May, four Bridgewater faculty members and a librarian joined in a panel discussion to offer their perspectives on "the changing college classroom." The participants' comments are summarized below:

The Changing College Classroom: A View From CART

THE CHANGING MATHEMATICS CLASSROOM

Glenn Pavlicek

The advent of the calculator 15 years ago led to dramatic changes in the teaching of mathematics. At first, students were forbidden to use calculators in math classes, since many teachers considered them to be a form of cheating. It took quite a while to overcome the mindset, even among math teachers, that math somehow was about

doing calculations. Even though most of us learned math by doing seemingly endless series of manipulations (multiplying tables of numbers or solving for x in 47 slightly different equations), it became evident that the calculator and later the computer could perform these tasks more efficiently than we could ever be able to. This led to a redefinition of the goals of teaching math.

The current emphasis in the classroom is not on computational skills, but rather on the underlying questions of when and why we perform these computations. New texts are appearing which replace the familiar presentation of 5 worked examples followed by 50 similar problems with the seemingly radical notion that problems are all different and should be asked in English (what our students still loathingly refer to as "word problems"— as if

in real life they will have equations to be solved dropped on their desks at work). When computation is de-emphasized, we are forced to reconsider how we define progress in our students and how we assess that progress. Students are now evaluated on their abilities to extract the critical information from a problem and to argue in favor of a particular line of attack. This introduces the student to the true skill of a mathematician, logical argument ("proof"). This is clearly a higher level skill than the ability to learn rote manipulations and requires a more open environment than the traditional rows of students huddled at their desks, pencils in hand. Students are now working in cooperative groups, writing reports on their solutions (or attempts at solutions). Portfolio analysis is one new

method of assessing development, replacing the old multiple choice exam. Students are using real (read "ugly" data) in their exploration and, as a result can work on problems that are rooted in reality. I have seen high school students use traffic flow data to decide how to time the cycle of a traffic light in a particular interaction so as to maximize traffic flow. Realizing that the subject actually has some use and is more than an esoteric mind game played by people with no social life helps to motivate and excite students.

Sandra Faiman-Silva

ENGENDERING THE CURRICULUM

Bringing new perspectives, specifically those of race, class and gender, into the curriculum, is one of our most important tasks. Until recently, academic knowledge was largely defined and transmitted by white males. Only in the past few decades have the voices of people who were previously excluded by virtue of their color, class or gender begun to be heard. My own

field, anthropology, illustrates some of the errors and omissions resulting from an exclusively male perspective. Until the 1960's, the great majority of ethnographers were men, and their native informants were almost always male members of the tribes they studied. Having little or no access to women, these anthropologists often neglected or underestimated the importance of women in indigenous societies. Female-centered events such as girls' puberty rites and the naming of infants play a crucial role in many native non-western cultures. Several tribes of the American southwest, including the Apache, conduct elaborate rites celebrating a girl's initiation into adulthood. Because they had limited contact with women and perhaps assumed that any important tribal event would focus on men, male anthropologists failed to appreciate the importance of women in these tribal cultures. Conditioned by their upbringing in the male-centered west, anthropologists consistently failed to study

women's experiences and to recognize the fact that, in many indigenous cultures in Africa, Australia and the Americas, women are viewed as innately powerful agents in their own right.

Anthropological studies of pre-historic societies have been equally misleading. For decades, it was assumed that "man the hunter" played the dominant role in these societies. In actuality, as recent studies have shown, women, who gathered grains, roots and vegetables, were responsible for securing a larger proportion of food supplies than men. Pre-historic hunting and foraging societies practiced a division of labor, men and women working on complementary tasks with both their contributions equally necessary for survival. Many anthropologists now believe that it was women who, while gathering food, observed and analyzed growing conditions and began to plant food themselves.

Male scholars have framed the questions and defined the subjects of

intellectual inquiry in many fields. Because women were barred from formal higher education and confined to the home until early in this century, they had few opportunities to become writers, artists or historians. Much of the writing they did, often in the form of letters, journals and diaries, was not perceived by male critics and scholars as worthy of study. Only recently have women's experiences been taken seriously as legitimate objects of intellectual inquiry.

The academic curriculum, defined for centuries by white males, is being expanded to accommodate diverse voices. In an increasingly multicultural society, it is of critical importance that students hear and learn to respect these voices.

DIVERSITY IN THE CLASSROOM

We live in a world which has become smaller, yet more complex and diverse and our classrooms will increasingly reflect that diversity. As educators, one of our missions is to prepare our students to be active participants in this rapidly changing world. To be successful in accomplishing this mission, we must engage, challenge, and empower them, expose students to the unfamiliar,

and view students as diverse integrated wholes.

To engage students means that the material they are studying must be relevant to their lives and worlds. We must encourage students to take "ownership" of their education and view learning as an ongoing, lifelong process.

To challenge students, we must promote critical thinking and encourage "trying on" alternative ways to conceptualize and solve problems.

To empower students involves listening to their voices, for example, obtaining their feedback about their experiences in our courses. Our students have much to teach us.

To expose the students to what is unfamiliar means making connections with the outside world. For example, one of my most gratifying experiences involved taking students in my "Introduction to Counseling" class to work at a psy-

chosocial rehabilitation clubhouse in Roxbury. I watched my students working side by side with clubhouse members, many of whom had been written off years before as "chronically mentally ill." With unforgettable fondness and pride, I watched one student being instructed in the fine art of seasoning fried chicken.

If we view students as diverse integrated wholes, we recognize that they are heterogeneous in terms of their world views, values and behaviors. They also come with different learning styles, which encourages us to employ multiple approaches to teaching as well as devising more varied ways for students to demonstrate competency in a given subject.

Finally, as faculty, our role as "indigenous providers" — natural supports — should not be minimized. I have been impressed by the number of life challenges and stresses that our students experience. For example, during the past semester I

have been approached by students to discuss such subjects as suspected sexual abuse of a significant other, depression, divorce of parents, mental illness in a family member, single parenthood, and difficulty accessing health, mental and social services to help deal with high family-related stress. It is up to us to decide how we wish to respond to our students' critical need for support, information and referral.

Shu - Chen Tu

HIGH TECHNOLOGY IN THE LIBRARY

Like most American academic libraries, the Maxwell Library began to computerize its facilities in the early 1980s and has increased its use of automation every year since then. Cataloguing, circulation and reference now involve use of automated systems; for example, users can search the

Online Public Access Catalog (OPAC) for holdings in the University of Massachusetts at Dartmouth library as well as the Maxwell Library. We have 16 CD-ROM indexes and abstracts and are in the process of setting up a CD-ROM index network on which library users can have multiple access to most of the CD-ROMs simultaneously.

All these changes have naturally affected students and teachers and, as a reference librarian, I have observed some of our library users' information retrieval behaviors:

— Once students have learned to do computer searching, they are reluctant to use the printed indexes or a card catalogue;

— Many students tend to overemphasize what the computers can do to meet their information needs, and they tend to ignore many valuable printed resources;

— Generally speaking, students appear to be more willing to learn computer searching than their teachers and seem to learn faster;

— Some teachers have arranged class library tours so that their students have group bibliographical instruction. These tours are of great value.

Teachers should plan on making periodic visits to the library in order to keep up with the frequent changes in library automation. Checking on our most recently acquired computers and databases will help faculty stay abreast of the new possibilities in information retrieval and of the problems that students encounter. For example, students who search computers to find information for their research topics often don't know which keywords to use, don't understand computer logic or don't realize that their topic may be too broad or too narrow. Because students can access so

many databases, they often retrieve more citations than they really need. It is important to teach them how to distinguish scholarly research papers from non-scholarly magazine articles, to show them how to recognize the authors' credentials, and to train them how to screen out the most pertinent books and articles from the hundreds of citations they find.

NEWS from the **j. joseph**

MOAKLEY CENTER

for Technological Applications

Bridgewater State College will be changed in many ways by the presence of the Moakley Center. This regional center, intended for the development, application and dissemination of applied technologies for education, will influence the work of faculty members, students, administrators and regional businesses. The Center is part of

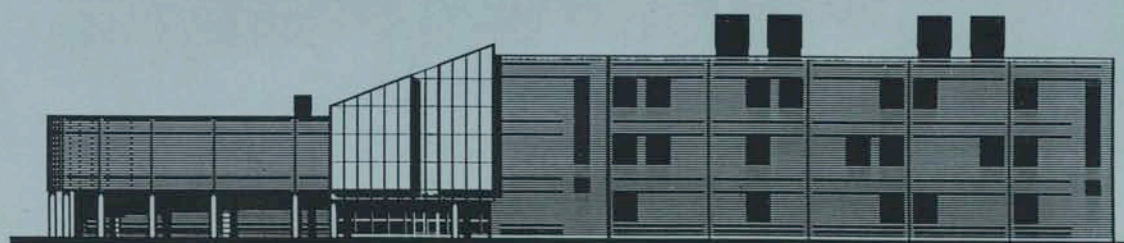
a larger, \$10 million campus project which will include a satellite receiving station and an extensive computer network.

This report on the Moakley Center focuses on the central building for the project, the design and con-

struction of which are estimated to cost \$5.8 million. The 4,688 square foot, three story building will be sited on the north side of the campus, next to the existing Burrill Avenue complex which includes Hart Hall and the Burnell Elementary School. It

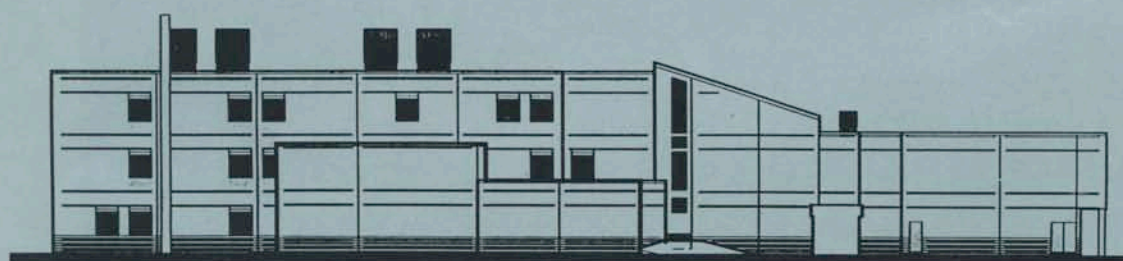
will house lecture halls, a computer laboratory, professional level television production studio, research and development facilities, exhibition spaces, and classrooms with a variety of features designed to allow for the application of technologies to learning and teaching.

This architect's drawing shows the southern face of the J. Joseph Moakley Center building. At



South Elevation

Architectural firm of Drummey Rosane Anderson, Inc. Newton, MA for all illustrations



North Elevation

the left of the building is the outside of the two-story, 200 seat lecture hall. Immediately to the right of the lec-

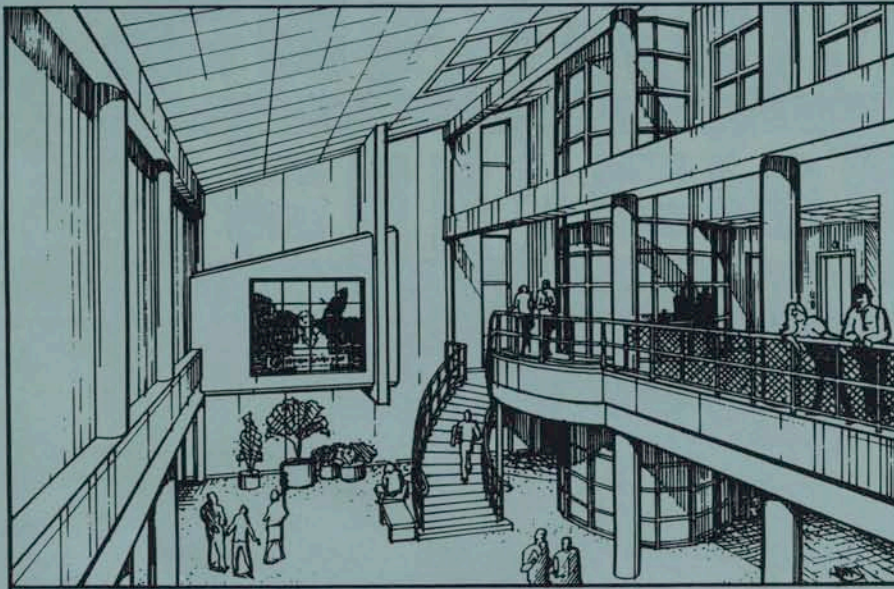
ture hall is the main entry lobby and atrium, the interior of which is illustrated below. The remaining two thirds of the building to

the right of the lobby contains the classrooms, television studio and computer facilities.

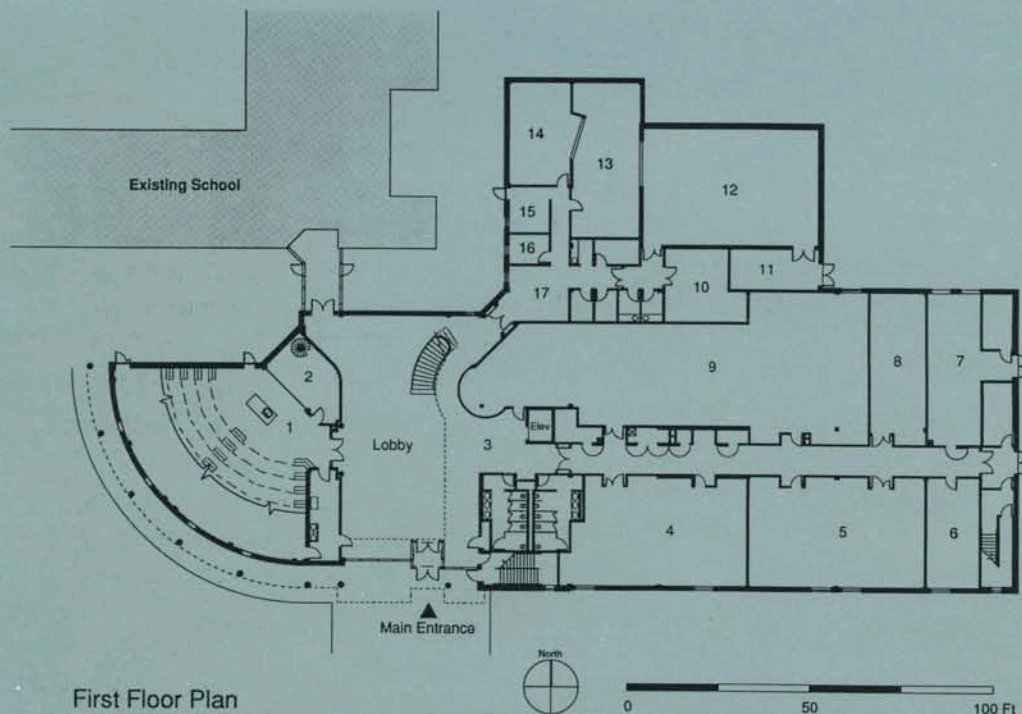
The lobby and

atrium of the Moakley Center will be used as the main access to the complex, and will provide space for presentations, displays and fairs for users of the center including regional businesses.

At the left of the first floor plan is the large lecture hall, which allows for presentations employing all the video, satellite and computer components of the overall campus project. The remaining space of the first floor is identified



J.J. Moakley Center Lobby

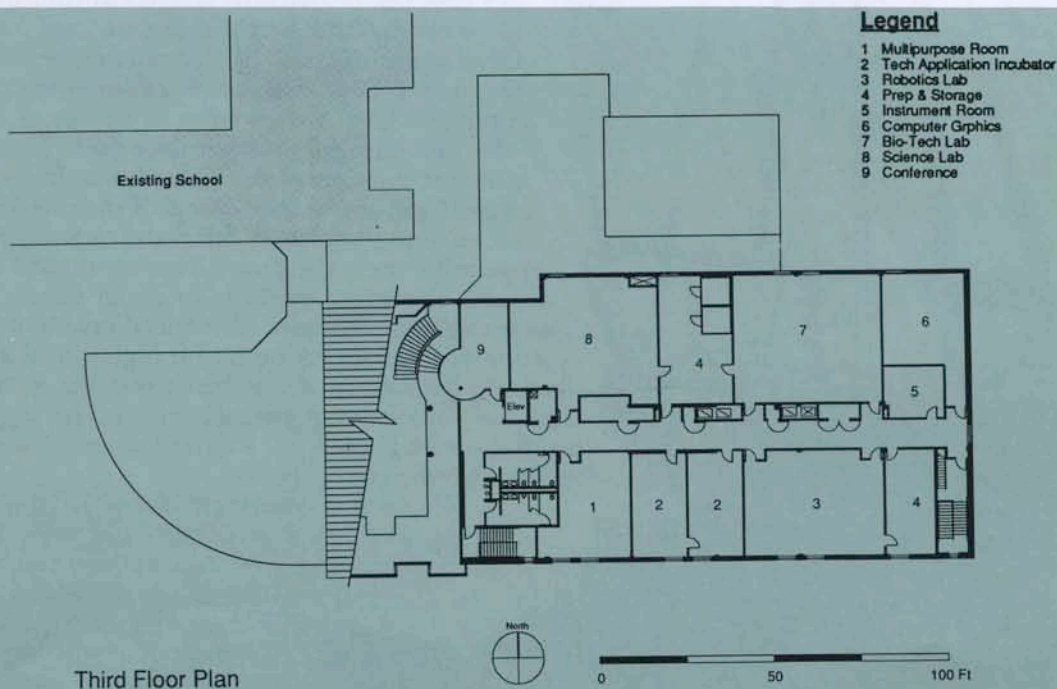
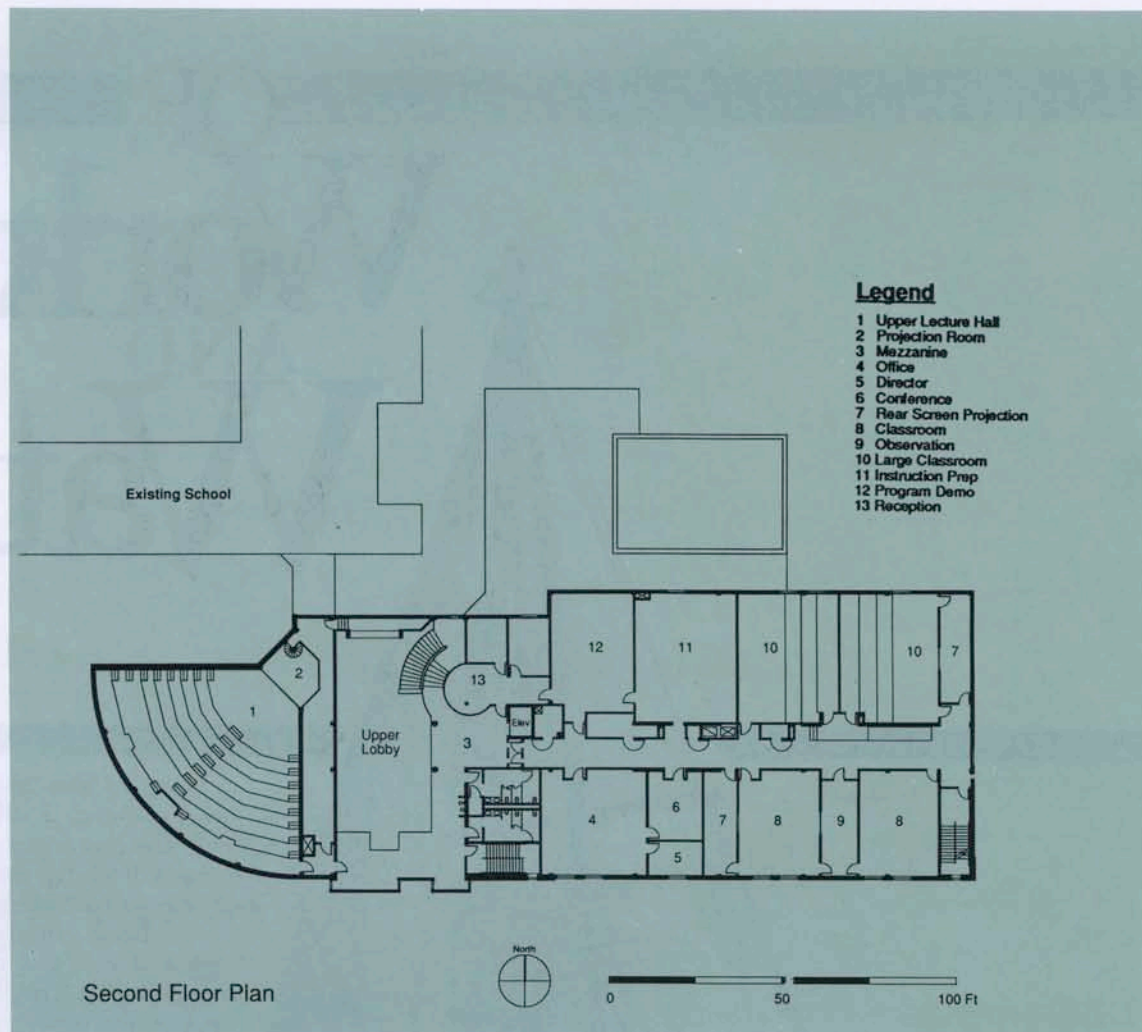


First Floor Plan

Legend

- 1 Lecture Hall
- 2 Projection Room Prep
- 3 Foyer
- 4 Multipurpose Room
- 5 Main Computer Room
- 6 High Density Storage
- 7 Mechanical
- 8 Distribution
- 9 Open Access Computer Room
- 10 Equipment Maintenance
- 11 Studio Storage
- 12 TV Production Studio
- 13 Control Room
- 14 Teleconference Studio
- 15 Graphics
- 16 Office
- 17 Reception

in the following numbered legend. The cable carrying satellite signals from the receiving station at the far end of the campus will enter the Moakley Center building from behind the television production studio numbered "12" on the floor plan. Space use on the second floor is also indicated in the following numbered legend. Note that the balcony seating for the large lecture hall is shown at the left of the plan, and that classrooms with features such as rear projection and observation wall are on this floor at the east end of the building.



The third floor of the building houses the laboratories which include general science, robotics, computer graphics and bio-technology.

OF Work AND Water

I hate to hear adults scold children for "drifting off" because we do it all the time, especially at work. After all, the practice is just like sleep; it may not look like much from the outside, but we need some of it every day to keep going.

Look closely at the places where people work and you may find bits of their "drifting-off" lives showing. They look up from work to a certain spot in the office and for a moment, or an hour, are elsewhere. Tucked into the corner of one colleague's book shelf is a scorpion in a chunk of amber. How often does the sight of it return her to a float trip through the Grand Canyon, and to the morning ritual of shaking out her boots? Dead scorpions are, in my experience, rarely found in offices. Pictures of children are more common. They always seem to be out of date. "Oh. He's changed so much since then. That one is almost three years old." It's no wonder people keep old pictures in their offices. If their stories are even close to true, family folks tend to go home to cope with their children's homework and hormones. The inner world is so much calmer and more stable in memories. One friend used to keep a picture of himself picking up his high school prom date. He has assured me he hasn't seen her in thirty years, but the picture is probably still in the top, left drawer of his desk under tea bags and exams. I wonder where he goes when he drifts off.

We need to have these places we go in our minds when work gets... well, like work. Even interesting jobs, like college teaching, require that we use knowledge and skills over and over again. So even those of us who love our jobs, and certainly those who

by William Levin

hate them, at times need other lives that can be entered without having to move from the desk...at a moments notice...without anyone knowing. In fact, I am doing it now.

On the wall over my computer is a chart of Buzzards Bay, and next to it is a watercolor of my sailboat. Someone looking something like me (he has too much hair) is at the helm. We are close-hauled under full sail, charging along a shore line I don't quite recognize. It has the low, scrub-pine look of much of the Elizabeth Islands in Buzzards Bay, but the sand is the wrong color. I think. It has been a few weeks now, and the details are fading. I can look at my chart and tell you the names of the islands Naushon, Pasque, Nashawena, Cuttyhunk and Uncatena and Nonamesset, the little ones closest to Woods Hole. Their Indian names evoke a time when the islands were not owned by the heirs of Malcolm Forbes, and there were no signs warning "no landing." The islands extend south west from Woods Hole for sixteen nautical miles to form the southern boundary between Buzzards Bay and Vineyard Sound. You will reach them in about two hours sailing in my semi-slow Sea Sprite (named "Late Bloomer") if you leave Sippican Harbor about noon as the sea breeze comes up, then sail a course of 190 degrees magnetic. It is not the kind of boating many people associate with summers afternoons, the kind done on flat water with slack sails. When I drift off at my desk I remember sailing by precise compass headings and worrying about the soundness of my gear. It is a special kind of relaxation that not everyone understands. It needs describing.

Late Bloomer is moored half an hour from work. The gear I need to sail her, an emergency tool kit, wool sweater, jeans and flashlight are in a waterproof bag beside the door to my garage. From a seated start in my office I can be on route 495 south in nine minutes. In the car on the way there I am usually still working. There are always details of my work life I need to note on a pad next to me. I may make up my mind about something I have been writing or will teach the next day. I can even recall working out the requirements of a research project while rowing out to the boat. But when I drop the mooring line into the cove, the door is shut on every detail of my life except the boat and the water. Sailing demands it, and I accept what sailing requires: its preparation, attention to detail, care about the weather, and most of all, concentration on what is happening on the water and on nothing else.

Buzzards Bay is only technically not the ocean. Out of shelter of the inner harbor, just a few dozen yards from the children playing on the beaches, there is real weather. You can count on it almost every day. What happens is that on summer and early fall mornings the sun heats the dark canopy of trees in the Myles Standish Forest, causing the air to rise. The water of Buzzards Bay is not warmed as quickly, so the colder air from over the bay rushes in to fill the void, and the sea breeze starts across the water from the southeast.

By two in the afternoon the wind is often up to 15 miles-an-hour and it has begun to bunch the surface of the water into a short, steep chop. Depending on the tide and the strength of the wind, the waves often average five feet and are separated from one another by some thirty feet. What that means to a twenty three foot boat is that a ten mile sail requires fifteen miles of motion, assuming you count the

up-and-down. A boat with a thirty foot waterline can span much of the opening between waves, so its ride is somewhat smoothed out. But a boat like Late Bloomer, with its nineteen foot waterline, climbs the face of each wave and slides down its back, often heeling over so that the mast is at 45° to the water. The waves usually come in fairly predictable sets of six or seven, then a flat or simply choppy area slides under the boat, and another set must be negotiated. But at the helm I cannot afford to depend upon this pattern, because rogue waves several feet larger than the average for the day arrive with no warning. One afternoon some friends and I were enjoying a roller-coaster ride through four and five foot waves when we were hit by a series of waves between which you could have hidden a small garage. The wind did not change to warn us. The color of the water didn't either. But our view of the sky did. One of my guests was, to put it generously, not a sailor, but to her this was a whee

of a ride. The corkscrew motion of the boat combined roll, pitch and yaw. Wedges of green sea water big enough to stop a fullback sloshed into the cockpit. I pasted a huge smile on my face to conceal from her the fact that she was confusing the deadly elements with an amusement ride.

And there is the sound of the wind. I turn my head the right amount this way or that and it gets in my ears, like breath across a bottle top, and it can peep, or hoot, or moan, or shriek. The wire and rope rigging turns the boat into a stringed instrument. The pitch of the vibrating lines becomes a familiar scale in time, so decisions about when to shorten the amount of sail are sung to me, or they are pounded on the mast by taut halyards. Sometimes, the sound the wind makes is so singular that it might as well just say in English, "Turn around and go home, stupid."

I am there now though I am at my desk. I am there in the same way as I am on evenings after rough sailing when closing my eyes during my hot shower makes the floor of the tub roll. I know that this may not be your kind of fun. I'm not trying to convince other people to do it, just to understand. Understand that we really do leave one world for another when we slip the mooring in the cove and set out to who knows what. Understand that on any day it may matter intensely that the sails, lines, wires, pulleys and other gear on board work correctly, and that we cannot know beforehand if that day is this one. And most important of all, understand that it is a good for all of us to have such places to go when we are not at work, if only to give us a place to revisit without warning or obvious movement when we are.





Illustration by Mercedes Nuñez

WHO'S
AFRAID
OF

VIRGINIA WOOLF?

a CULTURAL COMMENTARY by BARBARA APSTEIN

Who's Afraid of Virginia Woolf? Thirty years ago, Edward Albee chose this whimsically mystifying title for what was to become one of the best-known plays of the 1960's. What was there to be afraid of? At that time, Woolf was known primarily as a modernist writer who pioneered the stream-of-consciousness technique. Her novels were densely written, poetic, and demanding of readers, although perhaps less "fearsome" than the work of such contemporaries as T. S. Eliot, James Joyce and Ezra Pound. Albee's play, despite its title, had nothing to do with Woolf or her writing, but with the bitter domestic warfare of a couple locked in a love-hate relationship, played memorably in the movie version by Richard Burton and Elizabeth Taylor.

Today Woolf's novels, especially To the Lighthouse and Mrs. Dalloway, are standard in any study of modernist literature, and discussions of her work flourish in academic journals. But a lively interest in Woolf also exists outside the universities, which is surprising for an author who assumes such a high degree of literary sophistication and attentiveness in her readers. Sales of books by and about her have grown steadily: more than two million copies of novels, biographies, memoirs, diaries and letters by Woolf and her circle of friends known as the Bloomsbury group are in print from her publisher, Harcourt Brace Jovanovich. A highly praised film adaptation of her novel Orlando was recently released, and an opera based on Mrs. Dalloway was introduced in the fall of 1993 by the Lyric Opera of Cleveland. Woolf has even entered popular culture: in an ad for Barnes and Noble bookstores, her portrait, in profile, faces that of a smiling Stephen King. Devotees may purchase Virginia

Woolf pillows, tote bags and sweat-shirts, as well as a "personal journal" with a photograph of a girlish Woolf on its cover ("with Virginia Woolf overseeing your efforts, how can you go wrong?"). Last year, a new women's rock group chose the name "Shakespeare's Sister."

That Virginia Woolf's name has become widely known is probably due less to her novels than to two lectures she delivered at the women's colleges of Cambridge University in October, 1928. The lectures didn't attract much attention at the time; according to some reports, Woolf spoke softly and was hard to hear. A year later, A Room of One's Own, the published text of the lectures, sold fairly well. Although steady sales continued, the book would not reach its huge potential audience for another forty years: A Room was full of provocative ideas whose time had not yet come.

During the decades that followed, Woolf's reputation as a novelist grew steadily, but her feminist writings, including A Room, received very little attention. Some critics even felt that her feminist ideas marred her "creative" work, making it too political. It wasn't until the late 1960's that a newly-revived feminist movement discovered A Room of One's Own. While the feminists of Woolf's generation had focused their attention on public issues — women's right to a university education, to financial independence, to enter the professions — by the late 60's these battles had been largely won. The new generation of feminists turned their attention to the arts, seeking to analyze the distinctive qualities of poems, plays and novels by women — and asking why, through the centuries, women had produced many fewer works of art than men.

These were precisely the subjects Woolf had addressed in 1928. She had argued that women's writing is different from men's in fundamental ways and that "it is useless [for women] to go to the great men writers for help, however much one may go to them for pleasure." Because Woolf believed that "we think back through our mothers if we are women," she sought to identify a tradition of women writers. In the 1970's, A Room of One's Own became a basic introductory text in Women's Studies courses. The anthologies of literature by women which began to appear in print were guided by Woolf's analysis; in one of them, The Norton Anthology of Literature by Women, A Room is acknowledged to be "the first major achievement of feminist criticism in the English Language." By 1991 A Room was so widely known that a one-woman stage performance, with Eileen Atkins playing Woolf, had a successful run in London, New York and Boston. The proliferation of "Of One's Own" titles attests to the widespread influence of the essay: one of the first academic studies of literature by women, A Literature of Their Own, was followed by A Stage Of Their Own (feminist playwrights of the Suffrage Era); A History of Their Own (European history from a woman's perspective); A Heritage of Their Own (women in U.S. history); A Mind of Her Own (a biography of German psychoanalyst Karen Horney); and A League Of Their Own, a movie about the women's baseball league formed during World War II when the male athletes had gone off to war. Last year, when a women's bathroom was installed outside the U. S. Senate chamber (the men's room had of course been there for years), the New York Times head-

lined the story, "A (Rest) Room of Their Own." The Boston Globe did even better: "Flush with Victory, Senate Women Win Another: A Room of Their Own."

What, fifty years after its original publication, continues to give this essay such widespread appeal? Woolf's thesis — "a woman must have money and a room of her own if she is to write fiction" — is no longer controversial. Her tone is modest, even self-effacing; she had some trouble with the topic, Woolf confesses at the beginning of her essay, and is very much afraid that she will disappoint her readers. At first, *A Room* seems rambling, even aimless. Woolf sits on the bank of a river that flows through "Oxbridge" on a beautiful October day, she strolls through the university's courts and quadrangles, she has lunch. She recalls some fragments of poetry by Tennyson and Christina Rossetti, sees a cat without a tail, walks to "Fernham," a women's college, meets a friend for dinner. The following day, she goes to the British Museum to read what men have written about women, then browses through the shelves searching for books by women.

Yet the reader, accompanying Woolf in her wanderings, begins to sense that an argument is taking shape. Strolling around Oxbridge, lost in thought, Woolf inadvertently steps onto the grass:

"Instantly a man's figure rose to intercept me... His face expressed horror and indignation...he was a Beadle; I was a woman. This was the turf; there was the path. Only the Fellows and Scholars are allowed here; the gravel is the place for me."

Being shooed off the grass appears to be a trivial event and the overreacting Beadle a figure of fun. But this humorless enforcer of university rules returns in the guise of an ironic "guardian angel" who refuses Woolf admittance to the library ("ladies are only admitted to the library if accompanied by a fellow of the College or furnished with a letter

of introduction"), and he ultimately comes to represent all the ways in which men have discouraged and criticized women who wanted to use their minds.

Woolf's account of her two meals at "Oxbridge," luncheon at a men's college and dinner at a women's college, has the same surface casualness. The men's college serves an elegant meal, delectably described in mouth-watering detail: "soles, sunk in a deep dish, over which the college cook had spread a counterpane of the whitest cream," followed by partridges "with all their retinue of sauces and salads" accompanied by unlimited quantities of fine wine. Dinner at Fernham, the women's college, is a



much sparser affair: plain gravy soup, unadorned beef, prunes and custard. With the biscuits and cheese, water is served. Why, Woolf wonders, did the men drink wine and women water? Why are men's colleges so wealthy and women's so poor? Woolf's argument gathers energy as she begins to understand why, for hundreds of years, men have gone to universities and women have stayed at home.

Thinking about the conditions of women's lives leads Woolf to the imagined biography of Judith Shakespeare, a character as powerful and memorable as many of those in her novels. If a woman had been born with the genius of Shakespeare — what would her fate have been? Growing up in sixteenth century

England, she would have been denied access to education, discouraged from writing, probably forced by her parents into marriage at an early age. Woolf imagines Judith, driven by her extraordinary gift for language and love of the theater, running away to London. But she is unable to find work in the theater or any creative outlet for her genius, and finally, faced with an unwanted pregnancy, she commits suicide. Reflecting on Judith Shakespeare's tragic story, Woolf develops a provocative theory about the fate of creative women:

"When... one reads of a witch being dunked, of a woman possessed by devils, of a wise woman selling herbs, or even of a very remarkable man who had a mother, then I think we are on the track of a lost novelist, a suppressed poet, of some mute and inglorious Jane Austen, some Emily Bronte who dashed her brains out on the moor ... Indeed, I would venture to guess that Anon, who wrote so many poems without signing them, was often a woman."

Women's silences, the novels and plays and poems which, because of social and political constrictions, women could not write, are as much a part of Woolf's analysis as the books they did write. An essay which began as a modest and seemingly casual series of reflections on the subject of women and fiction has emerged as an intellectual journey whose power and daring would not be widely appreciated for another four decades.

Woolf would probably be as surprised as anyone at the success of *A Room of One's Own*. She saw it as a small and relatively insignificant part of her life's work (in her diary for October 1929, she referred to it as "a trifle"). Yet she was not displeased with it. Looking back ten years later, in 1938, she recorded in her diary that "on rereading, [*A Room*] seems to me a little egotistic, flaunting, sketchy: but has its brilliance."

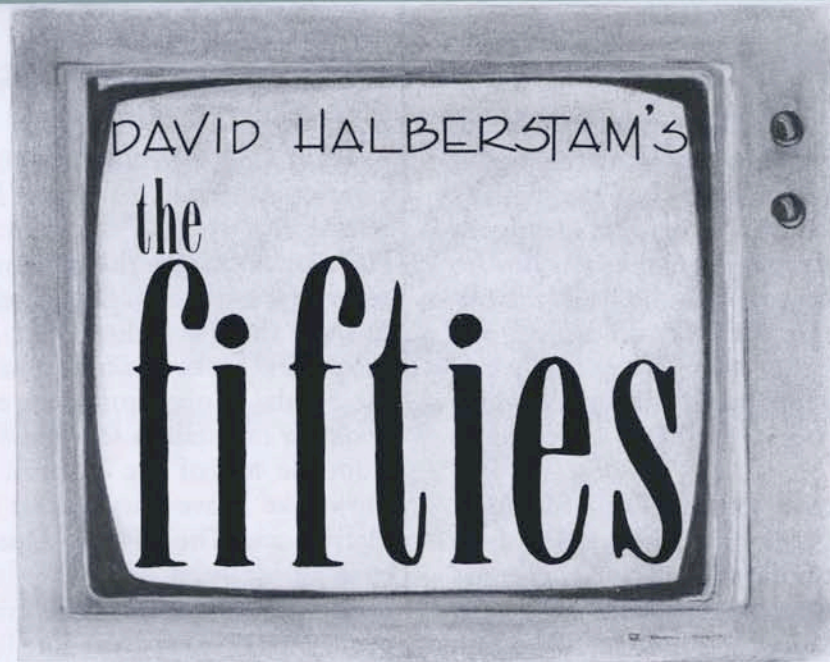


Illustration by RACHEL LEPINE

REVIEW BY CHARLES ANGELL

David Halberstam's *The Fifties* will come to rest on many bookshelves sandwiched between Godel, Escher, Bach and *The Rise and Fall of the Third Reich*, much praised and little read. Halberstam has in magisterial detail reconstructed the decade of Eisenhower, Elvis, and *East of Eden*. His interest, he tells us in an 'Author's Note' tucked behind the index, was "to write a book which would not only explore what happened in the fifties. . .but in addition show why the sixties took place—because so many of the forces which exploded in the sixties had begun to come together in the fifties, as the pace of life in America quickened" (799). Unaware at the outset that Halberstam means to view the fifties as launching the rocket that burst in the sixties, the reader proceeds through his narrative wondering what trajectory the book is describing. Made aware of the intent, the reader wonders what exactly Halberstam finds in the fifties that explains why the sixties happened.

The Fifties commences with America's anxious response to entering the atomic age. "It was a mean time. The nation was ready for a witch hunt" (9). Halberstam uses the career of J. Robert Oppenheimer to document the several kind of meanness—accusations of fellow-traveling, anti-semitism,

professional jealousy—that underlay the political and scientific debates early in the decade. He closes *The Fifties* with the Kennedy-Nixon debate where the witch-hunting continued—who was responsible for the 'missile gap'?—albeit on a more elevated plane. Between these events Halberstam recounts the stories of politicians, businessmen, entertainers, and crusaders. His chapters segue from MacArthur and the Korean War to Mickey Spillane, from Indochina to Brown vs. the Board of Education, from *I Love Lucy* to birth control research. Reading *The Fifties* is like catching up on a decade's worth of *The New York Times* in a few sittings. As is frequently the case with reading newspapers, it's the quirky, off-beat features that linger in memory. I mention this because, without some frame of reference for holding together the many events Halberstam records, the reader begins to reconstruct the fifties on the basis of personal understandings. A reader like myself, who grew from childhood to late adolescence during the decade, has his memory refreshed and restocked out of Halberstam's record. But I found myself establishing the relations between characters and events on the basis of their present manifestations. I can only explain Halberstam's difficulty in focusing the

BOOK • REVIEW

BY CHARLES ANGELL

fifties in terms of my own inability to hold American history in focus. For certainly events of the sixties exploded the many myths Americans had traditionally employed to hold their national history and identity in focus. Halberstam, too, no longer quite knows how to endow our past with meaning. What he does, then, is concoct a decade of images that play off against one another in his readers' interior space. They finally create a past that resembles some verbal video show where images of the past float free of historical context and continuity.

From this perspective, some of *The Fifties* most memorable and most interesting chapters relate how certain entrepreneurs, intuiting the enormous energies about to be released in post-war America, created businesses that altered the American landscape. William Levitt constructed affordable housing to meet returning GIs' demand for suburban living space. Gene Ferkauf organized E. J. Korvette's discount stores to supply these homes with furniture and appliances. Kemmons Wilson almost literally dreamed up Holiday Inns to satisfy the growing demand for inexpensive, clean travel accommodations. And Ray Kroc located a McDonalds nearby the homes, stores, and motels, serving and making billions. Halberstam tells the stories of these entrepreneurs without any trace of the anti-commerce bias so common to the fifties trained intellectual. He admires the foresight and perseverance these entrepreneurs displayed in making their ideas work. Where an earlier account of what these men achieved might well have decried the effect of this commercial architecture on the American countryside, its schlock effect so to speak, today this architecture defines the landscape and fascinates the critic like Halberstam who realizes that intellectually these entrepreneurs started the breakdown between high and popular culture such that today no critic can really draw any meaningful distinction between them. Indeed, the sixties did explode the basis for such elite criticism by the rapidity with which commercialization subsumed the radical critique. This commercialization was not so much a corrupt bargain intellectuals made with the agents of commerce as it was a natural response to the demands of the economic system in which everyone functioned.

Television made this economic system both more and less apparent to all, and *The Fifties*, if it contains any unifying theme for the reader at all, tells the story of how television imposed its hegemony over American society. Starting as a medium which the radio comic Fred Allen called "a device that permits

people who haven't anything to do to watch people who can't do anything" (180), television opened all areas of America to scrutiny by every other area. In telling his story of television's growing influence, Halberstam assigns the medium a trifurcate function: reporting, entertaining, and selling. Reporting set out to show the TV audience the America that is, and in the process broke down regional barriers that permitted the South, as one prominent example in Halberstam's book, to maintain a segregationist system in isolation from the rest of the country. Entertaining, through shows like *I love Lucy*, *Father Knows Best*, *Ozzie and Harriet*, and *The \$64,000 Question*, showed the audience an idealized America of stable families working their way through resolvable crises or, in the case of the game shows, using their intelligence and competitiveness to overcome long odds. Selling, of course allowed TV to bring the marketplace into the living room and operate as the single greatest influence on consumer behavior available.

What happened was, as we now are beginning to understand, that the reporters who came to prominence grew into stars and celebrities in their own right, glamorizing the news by their very transmission of it. The entertainers, idealized on the screen, Halberstam shows as hostages of their celebrity. He underscores that the Nelsons, the Ricardos, all the celebrated entertainers he chronicles, were dysfunctional, driven by the need to succeed, control, and dominate. The ads created for the viewers these same inner hungers and desires and offered the means for satisfying them. Dominating all were the images and television's power to convey an image-saturated landscape so that today, wherever we travel in the American landscape we're either surprised to find or disappointed to learn that it looks just like it did on television.

Halberstam, to my way of thinking, looks at the television industry's birth from a contemporary perspective very much aware that the demarcations between reporting, entertaining, and selling no longer hold. The categories have become indistinguishable—infotainment, mini-series, re-enacted documentaries, entertaining ads, and so on. It was during the sixties that this explosion of the boundaries occurred; the process has since then merely accelerated. This reader wishes that Halberstam had offered a conceptual framework for understanding this process. *The Fifties*, when all is said and done, is for Halberstam not so much a history of a decade as it is a welter of images, present to the memory but unplugged from the past.

RESEARCH NOTE



Photograph by Pam Flatley

In a few years Southeastern Massachusetts will once again benefit from rail service to Boston. In preparation for the arrival of commuter trains, extensive research is being conducted to determine the impact of the project on land use and transit.

One such research project is being conducted by Dr. Madhu Rao of the Department of Earth Sciences and Geography. Dr. Rao is working on the integration of remote sensing and Geographic Information Systems (GIS) technologies to examine land use impact of commuter rail service in Southeastern Massachusetts.

This research project will apply emerging technology for automated detection of land use change from satellite sensors and infrared aerial photography using a \$17,000 state-of-the-art GIS system, ARC/INFO, acquired by Dr. Rao for Bridgewater State College. The demographic and spatial data for the study area, the Middleboro

Branch of the Old Colony Railroad, will be extracted directly from TIGER (Topologically Integrated Geographic Encoding and Referencing) files of the U.S. Bureau of Census, which provide information on road networks, railroads, power lines, water bodies, census tracts/blocks, election districts, and other geographic features. The GIS and remote sensing softwares on campus, not only allow researchers like Dr. Rao to input data from a digitizer, but also can import aerial photographs, satellite imagery, scanned maps, plans, quad map images, or such other documents and trace each into a map file and thus keep data accurate and current for GIS analysis and modeling. The goal of Dr. Rao's research is to develop a computer-demonstration of land use change employing satellite imagery and predictive models of transit use with the Old Colony Railroad commuter service as the demonstration site. Dr. Rao's work will be invaluable as the Old Colony Railroad project moves forward and eventually impacts land use and transit in the region.

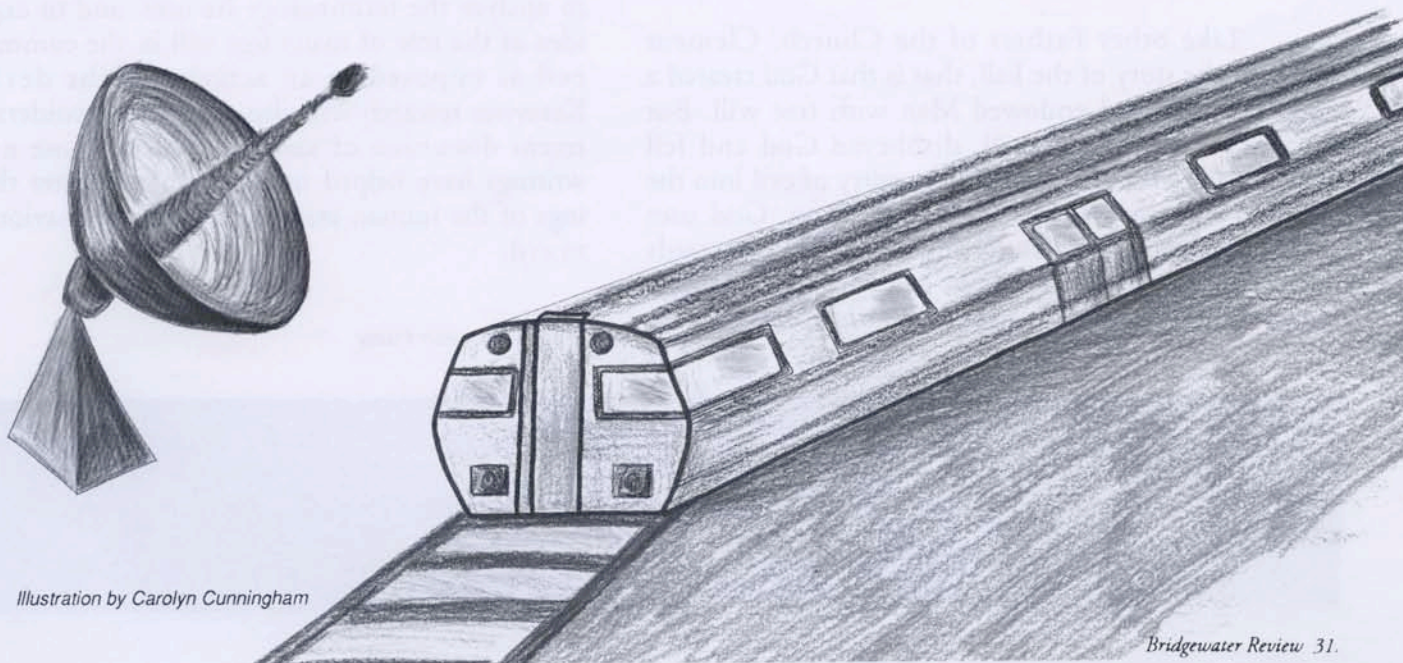
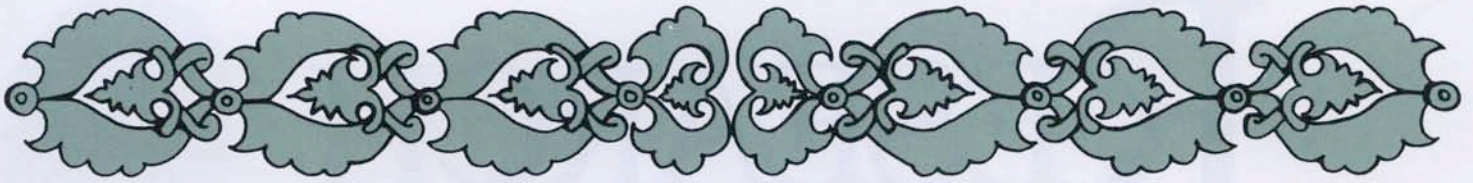


Illustration by Carolyn Cunningham



RESEARCH NOTE

The problem of evil is as old as man. Throughout history man has often posited such questions as: why is evil done to us or why do we do evil to others? Is there a source of evil and if there is what and

where is this source? Humankind has grappled with these questions almost from the very beginning of its existence, but has found no easy answer. In human affairs the truth is often inversely proportional to the certainty with which questions of this nature are customarily stated.

Professor Peter Karavites of the History Department is currently engaged in research that examines the thinking of Clement of Alexandria, a 2nd century A.D. leader of the Christian Church, toward evil, a subject which absorbed the attention of the early Church Fathers.

Like other Fathers of the Church, Clement accepted the story of the Fall, that is that God created a good universe and endowed Man with free will. But Man, abusing his free will, disobeyed God and fell from Grace. Man's fall implied the entry of evil into the world. Nevertheless, wishing to save man, God uses evil sometimes to awaken and draw Man towards repentance and salvation. Thus evil becomes a tool by which God tests and instructs Man, enabling him to

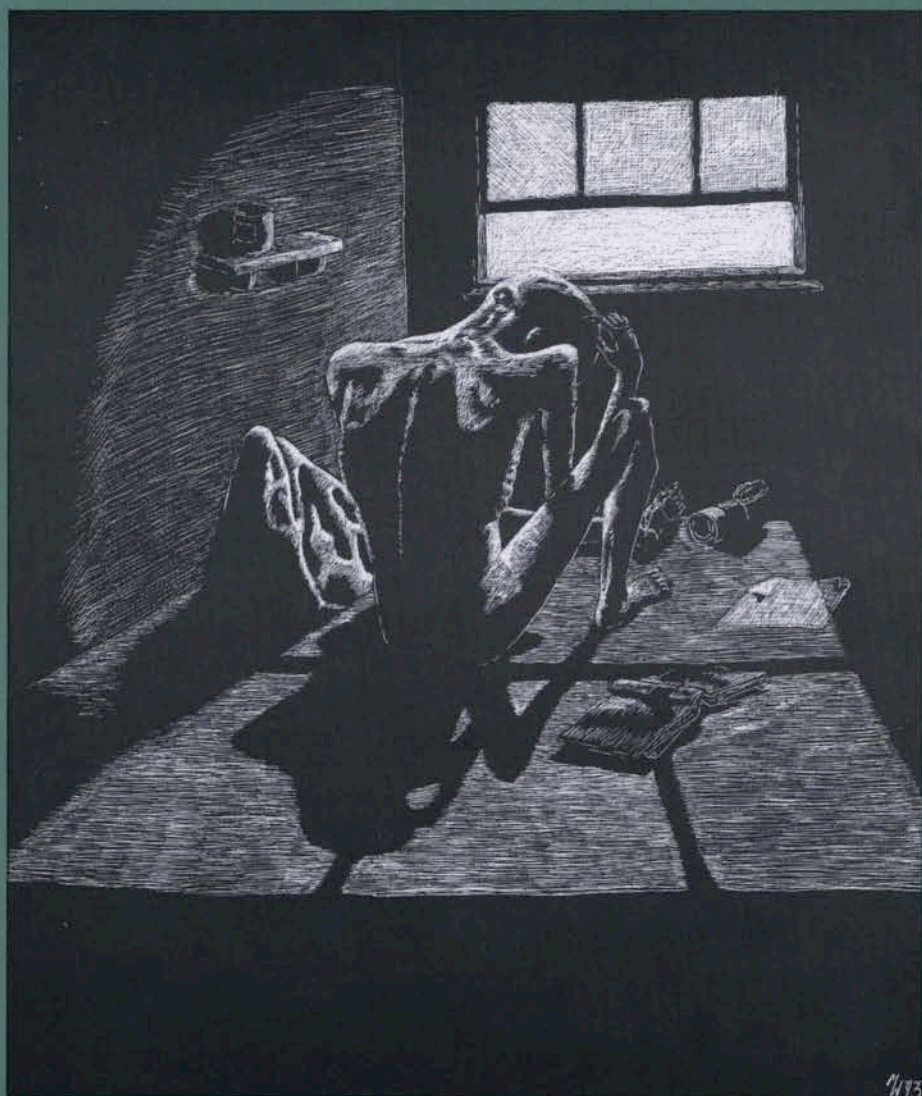
rally from his moral slumber toward his spiritual revival. Evil becomes the means for the achievement of higher good. This argument has not, however, satisfied the skeptics throughout history, especially those who like Voltaire saw innocent victims suffer from natural disasters and who consequently ridiculed the notion that this is the best of all possible worlds.

Originally a pagan, most probably an Athenian, Clement underwent a conversion to Christianity. But he never ceased to seek philosophical truth, claiming that philosophy, when properly understood, could further help its students in their search of the truth. Steeped in the philosophy of Plato, Aristotle, the Stoics, the Middled Platonists, and the ideas of the Alexandrian Jewish scholar Philo, Clement exhibits a fascinating openness to pagan thought. He also seems to have acutely felt the contradiction of evil in God's creation and sought to explain it within a coherent philosophical system.

Prof. Karavites intent is to delve into Clement's thought in order to investigate his conception of evil, to analyze the terminology he uses, and to explore his idea of the role of man's free will in the commission of evil as opposed to an activity of the devil. Prof. Karavites research will also take into consideration the recent discussion of various scholars whose numerous writings have helped us comprehend better the workings of the human mind and human behavior relating to evil.

Photograph by Pam Flatley





On the Backbone of Nothing by Miriam Walsh



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